FOREST TENURES IN BRITISH COLUMBIA

Policy Background Paper
Prepared by the
Task Force on Crown Timber Disposal

Victoria, British Columbia

December 1974

NOTE ON THE SECOND PRINTING

When the Royal Commission on Forest Resources was appointed in June 1975, this document, prepared by the Task Force on Crown Timber Disposal during the preceding year, was no longer available. Because it provides documentation which is directly relevant to the Commission's investigations, the Commission undertook this second printing.

In the meantime, a number of errors in the document have been noted, and to avoid these being perpetuated a corrigenda has been added inside the back cover.

The Commission is grateful to the B.C. Forest Service for comments and corrections, and for continuing to distribute this document. Copies can be obtained without charge from the Information Division of the B. C. Forest Service, Parliament Buildings, or the Royal Commission on Forest Resources, Suite M-15, 635 Humboldt Street, both in Victoria, B. C. The Commission welcomes comments and further corrections to the report.

Peter H. Pearse
Commissioner
June 1975

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CONTENTS

TABLES

FIGURES

PREFACE

The primary instruments of forest policy in British Columbia have undoubtedly been the tenure arrangements used by the Crown for alienating timber from the Crown to private parties. The various forest tenures that have been developed through time, each with its own set of terms and conditions, have been the vehicles not only for allocating rights to land and timber, but also for regulating the rate of harvesting, standards of utilization, forest protection and silvicultural practices and a wide range of other resource management functions. They have also been a means of pursuing broader policies, such as moulding the rate and pattern of industrial development in the Province and in governing the form and amount of public revenue from forest resources and the way these are ultimately divided among governments. The forest tenure system thus occupies a central place in any review of public forest policy.

Forest policy has changed dramatically over the years since the first timber rights were granted by the colonial government in what was to become the Province of British Columbia, and this evolution is traced in the forest tenures devised by successive governments. Many of the earliest alienations still exist, either because they were permanent Crown grants or because the temporary rights conveyed have

been repeatedly renewed. Today, the tenure pattern is a mosaic of rights of varying vintage which, because they were designed under different circumstances to serve different objectives, vary substantially in the rights they convey and obligations they exact.

Successive forest administrators and commissions of inquiry into forest policy have lamented this increasing complexity in tenure arrangements. The Royal Commission of 1910, after reviewing the several forms of Crown grants and temporary leases and licences then existing, stated that "... the holders of timber land should receive as far as possible, equal treatment at the hands of the Government..." and made a variety of recommendations toward that end.[1] In 1957 the Third Royal Commission, recalling that objective and quoting government statements which echoed it, observed "Forty five years later, uniformity of tenure has not been achieved; in fact, there are probably more varieties now than then."[2] In the seventeen years since that was written, several important new forms of tenure have been added, some significant variations in old arrangements have been introduced, and none have been eliminated.

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1. Final Report of the Royal Commission of Inquiry on Timber and Forestry, King's Printer, Victoria, 1910 (hereinafter Fulton Report 1910). 74 pp. + Appx., p. D-46.

2. Report of the Commissioner Relating to the Forest Resources of British Columbia, 1956, Queen's Printer, Victoria, 1957 (hereinafter Sloan Report 1956). p. 31.

The bewildering mixture of forest tenures now prevailing in the Province defies easy summary; yet a clear understanding of the systems of rights now in use and of their relation to each other is fundamental to a public policy review. The purpose of this Background Paper is to contribute to this understanding, by providing a documentary of the important forest tenure arrangements currently in force. It is not possible in a paper such as this to explain all the terms and conditions of forest tenures in exhaustive detail, for that would almost require a separate review of each contractual right. Instead, the paper emphasizes the important policy implications of the major forms of tenure - their current importance in the broad pattern of resource rights; their general purpose and intent; the procedures for their allocation; the rights conveyed to and the obligations of the holders; the special regulatory and administrative problems they give rise to; and their implications for industrial development and resource management in the public interest.

Tenure policy has been heavily influenced by official estimates of the extent of forest resources, their capacity for growth and susceptibility to losses from fire and other agents, and the apparent needs of the industry. Interpretation of these factors has changed substantially over the years. The first section of this paper is a brief summary of the forest

resources of the Province and their current status and use.

The second section provides a sketch of the evolution of tenure systems in British Columbia. Only in this historical perspective can some order be discerned in the public policy that created the otherwise confusing mixture of rights that prevail today. This is followed, in the third section, with a more detailed exposition of the nature and terms of each major tenure arrangement. The variety of systems inevitably makes this a rather lengthy catalogue. The final section draws on this documentary to examine some of the major policy issues involved.

Our objective in preparing this paper has been to provide an overview of the status of forest resources in the Province and the pattern of rights that prevails over them. We offer no recommendations for policy changes; but rather attempt to provide some of the background information that will be required by an investigative body that is expected to be appointed for the purpose of formulating recommendations. In preparing the paper, we were struck not only by the complexity of tenure arrangements but also by the lack of published or other readily available information on tenure policy - the objectives being pursued, the forms of contracts, administrative procedures followed and so on. Because so much of current tenure policy is not easily accessible elsewhere, we have compromised our attempt to write a brief perspective on the

pattern of resource rights with rather more detail than otherwise would have been necessary.

The Task Force is indebted to Mr. Richard S. Campbell, L.L.B., for much of the research underlying our documentation of forest tenures, and to Mrs. Patricia Torrison for assistance with this work. We are particularly grateful to officers of the British Columbia Forest Service, most especially Mr. J.A.K. Reid and Mr. C. Axhorn, who repeatedly put aside other pressing work to assist us with information we requested. The Task Force itself takes full responsibility, of course, for any mistakes, omissions or faulty inferences in this paper.

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1. FOREST RESOURCES AND PATTERNS OF USE

A review of forest tenure policy calls for at least a brief sketch of the extent and nature of the forest resources of the Province at the outset. It is widely recognized that British Columbia's forest endowment is very extensive, and that it provides the base for much of the economic activity of the Province. And, unlike some other natural resources such as minerals, petroleum and fisheries, forest resources are amenable to rather precise inventory.

But unambiguous measures of the extent of these resources are frustrated by changing economic circumstances. Natural resources can reasonably be defined as such only if they are of some value to man, and continuous change in the direct and indirect values derived from forests effectively alters the extent of the resource base. Thus successive estimates of the Province's timber reserves during this century have been progressively larger as the value of wood has risen and production technology has advanced, even though logging and fire have significantly reduced the original forest cover. And forest values other than timber have also grown, particularly in the last few years.

For these reasons any economic measure of forest resources is appropriate only at a particular moment, and

no comprehensive estimate of this kind has been attempted. Instead, recourse must be taken in physical measures, in acres or cubic feet of standing timber, based on explicit assumptions about what is valuable or potentially so. In this paper, attention is focused on timber, but it must be recognized that there is a wide range of other forest values that are important in different locations.

Forest Land and Forest Cover

For present purposes, we must accept the statutory definition of forest land, which is land "that in the opinion of the Minister (of Lands, Forests and Water Resources) will find its best economic use under forest crop", whether actually supporting timber or not.[3] More than half of the Province's total area of 234 million acres is so described. Most of the rest is unforested agricultural or developed land, water and alpine land, as Table 1 indicates. Forest land accounts for 131 million acres, or 56 per cent of the total area of the Province.

The natural influences of growth, decay, fire and other environmental factors keep forests in a state of dynamic change; and these are supplemented by the activities of man - harvesting, burning and reforesting - in altering the

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3. Forest Act, R.S.B.C. 1960, c. 153 (as amended), s. 2.

TABLE 1

AREAS OF MAJOR LAND CATEGORIES IN THE PROVINCE

	Millions of Acres	Per Cent of Total
Forest Land	131	56.0
Agricultural, urban, barren alpine and other non-forest productive land	93	39.7
Water	6	2.6
Parks and other reserves	4	1.7
Total	234	100.0

Source: B.C. Forest Service

structure of the forest cover. Table 2 shows the areas of the major forms of forest cover, in each of the Province's six Forest Districts, as indicated by a Forest Service inventory completed in 1972. Of more immediate importance is the volume of standing timber in each District. Table 2 indicates that while the coastal Districts comprise only about one-seventh of the total area of forest land, they support 43 per cent of the standing timber - reflecting generally heavier stands on the Coast than in the Interior. It has been estimated that British Columbia contains 40 per cent of the total volume of merchantable timber in Canda.

Forest Production

The volume of timber harvested in the Province has

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4. Except where otherwise indicated, the unit of volume used in this paper for wood is the cubic foot or cunit (one hundred cubic feet), and volumes of standing timber are measured to the "close utilization" standard.

TABLE 2

MAJOR FORMS OF FOREST COVER BY FOREST DISTRICT

Forest District	Mature	Immature	Not Satisfactorily Restocked	Non-Commercial Cover	Residual Stands[1]	Total Area	Merchantable Volume (million cunits)[2]
	- thousands of acres -						
Coast							
Vancouver	7,261.6	4,084.7	776.0	349.9	25.7	12,498.0	711.8
Prince Rupert (Coast)	6,617.4	677.7	133.5	85.0	.5	7,514.0	468.7
Total Coast	13,879.0	4,762.4	909.5	434.9	26.2	20,012.0	1,180.5
Interior							
Prince Rupert (Interior)	12,804.9	7,283.9	2,574.6	756.1	28.6	23,448.0	455.9
Prince George	18,798.2	24,525.9	3,163.9	2,502.6	56.4	49,047.1	562.2
Kamloops	5,817.4	6,130.0	539.8	142.5	237.8	12,867.4	204.2
Nelson	3,799.3	6,730.0	866.8	209.2	192.9	11,798.2	156.9
Cariboo	7,744.5	8,424.7	393.0	270.4	106.8	16,939.5	201.0
Total Interior	48,964.3	53,094.5	7,538.1	3,880.8	622.5	114,100.2	1,580.2
Total All Districts	62,843.3	57,856.9	8,447.6	4,315.7	648.7	134,112.2	2,760.7

1. Areas within which 25 to 75 per cent of the stand has been disturbed or removed by logging, fire, or other causes.

2. Estimated to "close utilization" standards, which includes live stems over 7 inches d.b.h. between 1-foot stumps and 4-inch tops.

Source: B.C. Forest Service, Forest Inventory Statistics of British Columbia, Queen's Printer, Victoria, 1972.

risen irregularly to nearly 25 million cunits in 1973. Almost all the timber cut is manufactured to some degree within the Province, mostly into lumber, plywood, pulp and newsprint. Rough estimates based on production of end products suggest that about 53 per cent of the volume cut is converted into lumber and one-third into pulp and newsprint, as shown in Figure 1. Table 3 indicates the quantities of these major products produced in 1973; and to illustrate their national significance, the proportions they represent in total Canadian production.

The industry in British Columbia is still oriented toward lumber production; and even more so in the Interior where about 56 per cent of the timber is converted to this product than on the Coast where lumber accounts for 49 per cent. On the Coast some 24 per cent and in the Interior 28 per cent is recovered in sawmill residues, chipped, and converted to pulp. About 9 per cent of the Interior cut is converted directly into chips from roundwood, and on the Coast the direct conversion of logs into chips accounts for 20 per cent of the harvest. Figure 1 and Table 3 ignore minor products and exports of logs and chips, none of which account for a significant share of the total harvest.

While timber is unquestionably the most valuable product of the forests, their use for other commercial purposes and

Figure 1. MAJOR USES OF TIMBER

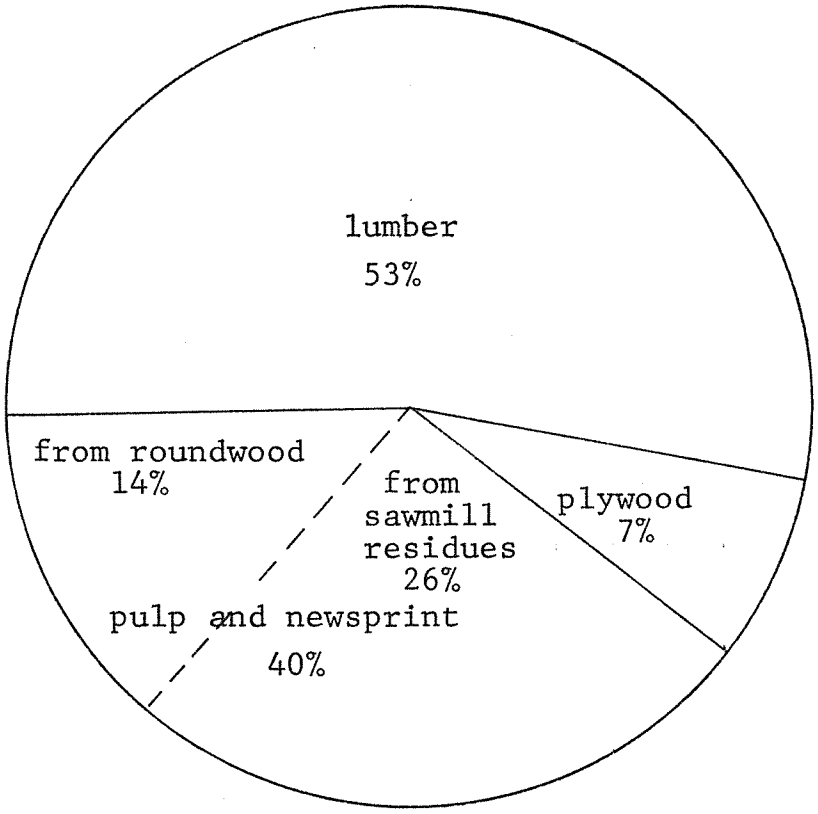

TABLE 3

PRODUCTION OF MAJOR FOREST PRODUCTS IN 1973

	B. C. production	per cent of total Canadian production
Pulp	5,695 thousand tons	28.7
Paper[1]	2,225 thousand tons	16.7
Lumber	10,311 thousand board feet	67.7
Softwood plywood	2,197 million square feet[2]	89.1

1. Newsprint and other paper products.

2. 3/8-inch equivalent basis.

Source: B. C. Department of Industrial Development
Council of Forest Industries.

their environmental value is increasingly important. The grazing land in the Province, which supports the ranching industry, is mostly forested land. Of the 18 million acres of usable range, 15 million is classified as forest land. In the central and southern Interior, grazing and timber production are frequently joint uses of forest land.

The rich wildlife and freshwater fisheries of the Province also depend upon the forest canopy for their habitat or for the stability of aquatic habitat, and regulation of forest harvesting operations to minimize adverse effects on fish and wildlife has recently received a good deal of attention. No attempt will be made here to review the numerous values derived directly or indirectly from forests, but mention should be made of the rapid growth in outdoor recreation, which, in this Province, typically involves use of forest land. Recognition of recreational demands beyond the boundaries of parks has begun to have an important influence on forest management: not only through provision of facilities such as picnic sites but also through a wide range of other measures governing such matters as public access to forest roads and aesthetic effects which are controlled through the terms and conditions of tenure rights.

2. EVOLUTION OF TENURE POLICY

Very little of the forest land in British Columbia has been alienated from public ownership. Before 1858, the Hudson's Bay Company, under a licence granted by the British Crown, held an exclusive trading monopoly over Vancouver Island and the territory west of the Rocky Mountains known as New Caledonia. By a separate Royal Grant in 1849 the Company also acquired proprietory rights to Vancouver Island on condition that a colony be established and all civil and military costs be met from the sale of land, coal and timber. At the height of the hectic Fraser River gold rush, the Company's licence on the mainland was revoked and the Crown Colony of (mainland) British Columbia established. Vancouver Island reverted to the Crown the following year, and authority to dispose of land and resources fell to the two colonial governments, both under the British Governor James Douglas.[5] Under the Hudson's Bay Company's administration, settlement was discouraged on the mainland and very restricted on Vancouver Island, so that almost all of the land and timber resources

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5. The Letters Patent conveying proprietory rights to Vancouver Island in 1849 reserved the Crown's right to repurchase the Island in 1859 if no colony was established, providing that the Company was reimbursed for its expenditures and property. Complications in negotiating a financial settlement with the Company delayed the reconveyance of the Island to the Crown until 1867. See Margaret A. Ormsby, British Columbia: A History, Macmillan of Canada, 1958. Chapters 5, 6.

of the infant colonies still belonged to the Crown. The two colonies were united in 1866; and, upon joining the Confederation of Canada in 1871 as the Province of British Columbia, ownership of the erstwhile colonial lands fell to the Province and under the jurisdiction of the Legislature.

Shortly before unification of the colonies, Governor Douglas had introduced the principle of granting rights to harvest timber on Crown land without alienating the land itself, although the traditional system of making Crown grants of land and resources continued for several decades. But from the turn of the century successive governments of British Columbia have, as a matter of policy, refrained from granting forested land; and so the Crown has retained title to most forest land and developed a variety of tenure arrangements to make timber available to private enterprises. This general policy, refined by numerous legislative innovations over the years, has survived to the present; with the result that responsibility for managing the vast forest resources of the Province rests almost entirely with the provincial Forest Service, on behalf of the Crown. The following paragraphs attempt to describe briefly the evolution of tenure arrangements which are the medium for much of the Forest Service's management control.

Policy up to 1912

For some years, the only method of transferring

timber rights from the Crown to private parties was grants of fee simple interest in the land. During the colonial period and the early years of provincial status Crown grants of forested land were not restricted, and it was in this era that significant tracts of high quality timber were granted, largely in aid of railway construction. Most of these grants have since reverted to the Crown. The 1884 grant of 1.9 million acres of Vancouver Island in aid of the Esquimalt and Nanaimo Railway, containing some of the Province's finest stands of virgin timber, is the most dominant example of this early approach prevailing today.

The policy of granting rights to harvest timber without alienating the land originated in the Land Ordinance of 1865, issued by the Governor of the colony of Vancouver Island one year before unification with the colony of British Columbia. The Ordinance made it possible to grant rights to extract timber through Timber Leases which would be subject to whatever charges, terms and conditions that the Governor might prescribe. The earliest leases were unrestricted in size and carried no charges or terms, although subsequent enactments and revisions imposed a variety of levies, terms and conditions.

Timber Leases were granted until 1905, and between 1901 and 1903 a number of extensive Pulp Leases were granted

also. These tenures were designed to accommodate the needs of sawmills and pulp mills respectively. In 1888 Timber Licences, limited to 1,000 acres each, were introduced to serve the needs of independent loggers, and by the time this form of disposition was discontinued in 1907 Timber Licences had become by far the most important form of harvesting right. Some of these licences were later converted to Pulp Licences, giving the holder certain concessions with respect to pulpwood harvested from them.

All these forms of tenure - Timber and Pulp Leases, Timber and Pulp Licences, and Timber Berths (described below) - comprise the so-called old temporary tenures. Most of them have since expired, so that the total acreage now outstanding is less than one-sixth of that in 1907. Nevertheless, the 1.8 million acres they now contain support some of the most valuable timber in the Province.[6] Their location has had an important influence on the later development of other tenure patterns.

The Land Ordinance of 1865 provided an alternative to Crown grants, but the present restrictive policy toward Crown grants of forest land has its roots in an amendment to the

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6. For a more detailed review of the history of old temporary tenures see Crown Charges for Early Timber Rights, First Report of the Task Force on Crown Timber Disposal, Victoria, 1974. Appendix B.

Land Act in 1887 which prohibited grants of land "chiefly valuable for timber". Although this restriction was apparently not well enforced for many years, the only legal means of alienating timber from that date and until 1912 was by means of the old temporary tenures.

Two other policy innovations during this period deserve mention. In 1891 and 1892 legislation introduced the principle of competitive auctions of timber leases. This procedure, which became fundamental to new forms of tenure introduced later, has important implications both for the allocation of timber among potential users and for appropriation of the Crown's financial interest in the resource.

The second change had to do with restrictions on the export of logs. Legislation in 1901 required that all timber cut on Crown lands be manufactured in the Province, and the Timber Manufacture Act of 1906 required that any timber cut from lands granted by the Crown after the effective date of the legislation be subject to the same restriction. These provisions still apply.

Policy between 1912 and 1948

The suspension of further issues of Timber Licences in 1907 was preceded by a brief period of frenzied "timber

staking" caused by the convergence of a strong speculative demand for timber and attractive new licensing policies. Apprehensions about exhaustion of the eastern pine forests, construction of the Panama Canal, and strong lumber markets drew attention to the apparently unlimited resources of the west coast. The provincial government, in need of revenue, made Timber Licences much more attractive, mainly by eliminating restrictions on their transferability. The provincial treasury would receive annual payments for these rights that could be adjusted from year to year. In three years the number of licences sprung from less than 15 hundred to more than 15 thousand. In the face of these events the government suspended licensing in 1907 and issued an Order-in-Council reserving all the remaining unalienated timber.

To reassess the situation, the government appointed the first Royal Commission of Inquiry into the forest resources of the Province, and its 1910 report[7] led to a turning point in tenure policy. The Commissioners estimated that two-thirds of the merchantable timber in the Province had been alienated, and this appeared to be enough to serve the needs of the forest industry for several decades. They concluded that what was left should be kept intact as a reserve for the future, although they recognized the need for

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7. Fulton Report 1910.

exceptions to general reservation. Since 1907 there had been no means of making new allocations of Crown timber and so to meet special needs the Fulton Commission recommended procedures for competitive auctions of tracts of timber, which were embodied in the first Forest Act of 1912. Anyone might initiate a sale of the timber on a prescribed tract of Crown land, and by public auction competitors might bid bonus prices in excess of the upset price determined by Forest Service appraisal.

Because it was the only means of making additional Crown timber available (apart from Handloggers Licences) until 1947, the timber sale system grew in importance. By 1945 Timber Sale Licences accounted for 23 per cent of the total harvest in the Province and half the cut in the Interior.

The mainland Railway Belt that the Province had conveyed to the Dominion in aid of railway construction was reconveyed back to the Province in 1930, except for the portions that had been Crown-granted in the meantime. The Dominion had also granted timber harvesting rights in the form of Timber Berths in the Railway Belt, and these were inherited by the Province and have since been administered by the Forest Service as one of the forms of old temporary tenures.

The Forest Act of 1912 made the first provisions for

continuous forest management by enabling designation of Provincial Forest Reserves. These Reserves are areas set aside under Order-in-Council for perpetual forestry purposes and are not available for settlement or any other purpose unless taken out of Reserve by Order-in-Council.[8] The number of Provincial Forest Reserves has gradually increased to 94, and these cover 75 million acres.

Sustained Yield Policies after 1945

By 1943, apprehensions had arisen over the unbalanced pattern of timber harvesting and inadequate provisions for future forest crops. Most timber was still being cut on old temporary tenures concentrated in the best stands and in accessible parts of the lower coast. Timber sales were growing in importance, but they too were generally clustered around more developed areas. Thus, while extensive regions of mature and over-mature timber were untouched, the rate of harvesting in some areas threatened resource exhaustion. And apart from the Provincial Forest Reserves, there was little assurance of continuous forest production. In addition, the forest industry complained that the short-term timber sale system was an inadequate supplement to timber supplies from Crown-granted lands and old temporary tenures to provide the assurance of long-term raw material supply necessary for

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8. Forest Act, op. cit., s. 33.

investment in new utilization plants. These and other general concerns about forest resource management led to the appointment of the second Royal Commission of Inquiry which reported in 1945.[9] The Commissioner recommended that the Province implement a policy of sustained yield management by establishing private and public sustained yield forest management units.

Shortly after the report was released, legislation introduced a new form of tenure that would enable owners of Crown-granted lands and old temporary tenures to combine these holdings with enough unencumbered Crown land to form a management unit capable of yielding a continuous harvest of timber in perpetuity. These Tree Farm Licences (originally called Forest Management Licences) commit the licensee to manage the entire area according to sustained yield principles under the general supervision of the Forest Service. In return, he has obtained an exclusive right to harvest the Crown timber included in the licence area, without competition.

Tree Farm Licences were designed primarily to enable the practice of sustained yield forestry by private interests. Other demands for Crown timber would be met by Public Sustained

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9. Report of the Commissioner Relating to the Forest Resources of British Columbia 1945, King's Printer, Victoria, 1945 (hereinafter Sloan Report 1945).

Yield Units (originally called Public Working Circles). These would be managed on a sustained yield basis for the Forest Service, and the regulated annual harvest made available to independent operators by means of Timber Sales.

Some Public Sustained Yield Units were being harvested in excess of the sustainable rate from the outset, and others soon became fully committed. In the early 1960's the government adopted a number of techniques to ration the allowable harvest where it was fully allocated. The main device was the informal "quota" system which favours established operators by protecting them from competition. The "quota" arrangement has become one of the most important features of tenure policy, and the associated barriers to competition have reduced bidding in excess of the appraised upset price to a rare occurrence.

Most of the forest land of the Province is now included in 34 Tree Farm Licences and 94 Public Sustained Yield Units, containing 10 million acres and 80 million acres respectively. Their general distribution is indicated on the map forming the Appendix. The Tree Farm Licences contain half of the old temporary tenures as well as considerable areas of Crown-granted lands. Alienations in Public Sustained Yield Units are in various forms of Timber Sale Licences, and certain rights are held under Pulpwood Harvesting Agreements as well.

Recent Developments

No new Tree Farm Licences have been issued to industry since 1966, although it is expected that one will be issued to a northern municipality in the near future. During the last decade new innovations in tenure policy have been inspired by advances in sawmilling technology and the rapid expansion of pulping capacity in the Interior. The most important of these is a variant of the Timber Sale Licence known as the Timber Sale Harvesting Licence. Unlike ordinary Timber Sale Licences, which carry an exclusive right to harvest a prescribed tract of timber over a period of a few years, these new licences commit the Crown to make available to the licensee a specified volume of timber each year from a designated Public Sustained Yield Unit, for (typically) 10 years. The exact area from which the timber is to be removed is incidental to the licence. During the term of the licence, short-term Cutting Permits authorize cutting in designated areas and specify the appraised stumpage rates and other conditions of harvesting including forestry, protection and other management responsibilities.

The closer the standards of utilization, the greater the volume of timber available under sustained yield allocations. Thus, as utilization facilities were adapted to accommodate smaller and more defective timber the available annual cut in Public Sustained Yield Units increased. In the

early 1970's the Forest Service therefore increased the "quotas" of established licensees by one-third in the Interior and one-half on the Coast. In most cases this left unallocated a residual volume of the extra timber volume available, and this has been allocated by short-term sales known as "Third Band" Timber Sale Licences.

The trend toward closer utilization of timber in the Interior has been linked to the rapid growth in pulp milling capacity. By the 1960's, the Interior sawmilling industry, through the "quota" system, had to a large extent preempted the annual harvest available in Public Sustained Yield Units, but only to the then prevailing lumber recovery standards. The timber falling below sawmilling standards and sawmill residues offered a source of wood fibre for new pulp mills, and Pulpwood Harvesting Agreements were designed to provide them with assured supplies of this material. These agreements provide licensees with options to purchase timber below sawmilling standards from designated Public Sustained Yield Units, and with obligations to construct and operate a pulp mill and to purchase residual chips from sawmills.

There are now 5 Pulpwood Harvesting Agreements in force in the Interior. But the holders have rarely exercised their options to purchase timber because supplies of residual pulp chips from sawmills have in general proved

sufficient for their raw material requirements.

Current Status of Forest Land

Since introduction of sustained yield policies in 1947, more than 92 million acres, or more than two-thirds of the total forest land in the Province, has been incorporated into one of the forms of sustained yield management units - mainly Public Sustained Yield Units and Tree Farm Licences. Several new Public Sustained Yield Units are planned. Table 4 summarizes the status of forest land in the Province, but it must be read with caution. In particular, the area shown as "other forest land" should not be regarded as totally committed because most Timber Sale Licences and Timber Sale Harvesting Licences cover timber in this category even though most of these tenures licence a volume to be harvested rather than a geographical area.

Table 5 provides a summary of the contribution of each tenure category to the total provincial harvest in 1973. Comparison of Tables 4 and 5 reveals that the share of the harvest originating from Crown granted-lands and old temporary tenures, in particular, considerably exceeds the proportion of forest land that they represent. The same is true for Tree Farm Licences which, as Table 4 shows, includes many of these older tenures. Timber Sale Licences and its variant, Timber Sale Harvesting Licences, together account for more than half the total harvest, but for reasons mentioned above it is not appropriate to compare this with any particular area shown in Table 4.

TABLE 4

TENURE STATUS OF FOREST LAND 1973

- Thousands of Productive Acres -

	In Regulated Sustained Yield Units				Outside Sustained Yield Units	Total	(per cent)
	Public Sustained Yield Units	Tree Farm Licences	Taxation Tree Farms[1]	Farm Woodlots			
Crown-Granted Land	-	545.4	826.4	1.8	4,952.5	6,326.1	*4.72*
Federal Land[2]	-	-	-	-	1,090.1	1,090.1	*0.81*
Provincial Crown Land							
Old Temporary Tenures	-	945.2	-	-	833.0	1,778.2	*1.33*
Tree Farm Licences "Schedule B Lands"	-	8,986.8	-	-	-	8,986.8	*6.70*
Christmas Tree Permits	114.9	-	-	-	-	114.9	*0.08*
Minor Forms of Licence	-	-	-	9.4	-	9.4	*0.01*
Reserved Lands[3]	-	-	-	-	3,082.4	3,082.4	*2.30*
Other Forest Land	79,509.1[4]	-	-	-	33,215.2[5]	112,724.3	*84.05*
Total Provincial Crown	79,624.0	9,932.0	-	9.4	37,130.6	126,696.0	*94.47*
Total Forest Land	79,624.0	10,447.4	826.4	11.2	43,173.2	134,112.2	*100.0*
Per Cent of Total	*59.37*	*7.81*	*0.62*	*0.01*	*32.19*	*100.0*	

1. Excluding Taxation Tree Farms included in Tree Farm Licences.
2. Includes Indian Reserves and National Parks.
3. Includes Class "A" Provincial Parks and other reserved areas.
4. An unknown fraction - in the order of 5 per cent - of this area is authorized for harvesting under Timber Sale Licences and Cutting Permits at any particular time.
5. Includes special sale areas, proposed sustained yield units and unregulated units.

Source: B.C. Forest Service, Annual Report, 1973, Victoria, Queen's Printer, 1974.
Ibid., Forest Inventory Statistics of British Columbia, Victoria, Queen's Printer, 1972.

TABLE 5

ORIGIN OF 1973 HARVEST BY TENURES[1]

(thousands of cunits)

	In Regulated Sustained Yield Units				Outside Sustained Yield Units	Total	*(per cent)*
	Public Sustained Yield Units	Tree Farm Licences	Taxation Tree Farms[2]	Farm Woodlots			
Crown-Granted Land	-	781.5	530.0	3.3	2,334.0	3,648.8	*14.73*
Federal Land[3]	-	-	-	-	127.8	127.8	*0.52*
Provincial Crown Land							
Old Temporary Tenures	-[4]	1,630.5	-	-	2,238.8	3,869.3	*15.62*
Timber Sale Harvesting Licences	7,847.5	-	-	-	-	7,847.5	*31.69*
Other Timber Sale Licences	4,092.1	145.9	-	-	352.3	4,590.3	*18.53*
Tree Farm Licences "Schedule B Lands"	-	3,953.2	-	-	-	3,953.2	*15.96*
Beachcomb, Trespass, Miscellaneous	498.2	-	-	-	233.3	731.5	*2.95*
Total Provincial Crown	12,437.8	5,729.6	-	-	2,824.4	20,991.8	*84.75*
Total Harvest	12,437.8	6,511.1	530.3	3.3	5,286.2	24,768.4	*100.0*
Per Cent of Total Harvest	*50.22*	*26.29*	*2.14*	*0.01*	*21.34*	*100.0*	

1. Volumes Scaled in 1973.
2. Excluding areas included in Tree Farm Licences.
3. Includes Indian Reserves.
4. The harvest from old temporary tenures within Public Sustained Yield Units is included in column 5 because it is not considered to be part of the regulated cut from these units.

Source: B.C. Forest Service.

3. CURRENT TENURE SYSTEMS

As the forest economy of the Province developed and spread outward from the early centres of commerce, the innvoation in tenures that were introduced from time to time tended to be applied to progressively more remote areas and to stands of lower quality. There are many exceptions to this generalization, but it is evidenced in the pattern of rights that prevails today. The Crown granted timberlands are heavily concentrated in the rich forest areas on southern Vancouver Island, along the first railroad routes, and near the early agricultural and mining centres of the southern Interior. The old leases and licences are found mostly on readily accessible coastal areas and near Interior rail routes, and cover relatively choice forest land. In contrast, the newer forms, such as Pulpwood Harvesting Agreements are typically found in the more remote stands of marginal timber.

This broad pattern of tenure distribution has little to do with their relative importance today, however. In the following discussion tenures are dealt with roughly in chronological order of their introduction because this helps in understanding their varying characteristics and purpose and because this corresponds roughly to the order of their importance.

The preceding section provided a brief sketch of the

evolution of tenure policy. This section examines each tenure form in more detail, paying particular attention to its apparent purpose and intent, the procedures governing its acquisition, the Crown revenue devices that apply to it, other terms and conditions, and its current status in the overall forest management picture in the Province.

CROWN GRANTS

After the early decades, when public policy permitted unrestricted grants of timbered land, a succession of granting provisions was introduced. Legislative changes over the years progressively added more and more constraints on granting procedures and qualified the rights of the grantee: restrictions on the availability of forest land for alienation, reservations in favour of the Crown of the timber, or an interest in the timber by way of royalties, and regulations governing the export of timber from lands granted were the most predominant. As new conditions were introduced they typically applied to all subsequent grants, exempting previous alienations; so that, generally, the date of the original grant determines many of the rights and obligations of the current owners.

Some lands that have been granted by the provincial Crown over the years were conveyed under special circumstances. Early grants of the Esquimalt and Nanaimo Railway Belt and the Railway Belt on the mainland were made to the federal Crown in aid of railway construction, before 1887 when timber royalties were first reserved. Upon completion of its obligations the Esquimalt and Nanaimo Railway Company was granted its extensive tract on Vancouver Island; in contrast most of the mainland Belt was retained by the Dominion until 1930, when it reconveyed the ungranted portions back to the

Province. No royalties are reserved on either those tracts in the Esquimalt and Nanaimo Belt still in private ownership, or the small portions of the Railway Belt transferred by the Dominion prior to 1930. Still other parcels, granted in aid of intra-provincial railways, were treated no differently than other Crown grants; and most of them reverted to the Crown.

Most of the areas now included in Indian Reserves were granted by the provincial Crown to the Dominion, to be held in trust for the various native bands. No royalty is payable in respect of timber cut from these lands. These areas and other federally-owned lands include relatively little timber-productive land and contribute only an insignificant fraction of the total provincial cut.

Purpose and Intent

Early Crown-granting policy was simply an adjunct to more general frontier policies aimed at promoting settlement and economic development. The Crown grant procedure was consistent with the traditions of freehold ownership inherited from England. Timber conveyed under these grants was often of little interest to either the Crown or the grantee, and indeed was sometimes considered an obstacle to settlement and agriculture. And, even where the timber was valuable, from 1858 to 1865 no other system for allocating it to potential users was available. At first, and until 1887

forest land like other classes of Crown land was available for settlement, and the fee simple interest (which includes the exclusive right to all timber resources upon the land surface) was conveyed without any special restriction.

Allocation Procedure

New Crown grants of forest land have been precluded by legislation for many years, as already explained. The procedures that earlier governed the acquisition of the Crown grants that exist today were usually very simple, involving either preemption of land for settlement, or outright sale at prices prescribed by statute. The large blocks conveyed in aid of railway construction were authorized by special legislation.

Rights and Obligations

A grant of land from the Crown confers the fee simple interest on the grantee, entitling him and his successors in title to exclusive possession and use of the lands in perpetuity. Until it is cut, forest cover on granted lands is considered in law to be part of the land, and hence under the grant the owner obtains an exclusive right to any existing or future crops of timber. This exclusive right may be qualified in two important ways, however. First, the grant itself may except rights to prescribed assets on the land such as timber, or it may convey them subject to a reservation to the Crown of a financial interest in the resource in the form

of royalty. Second, the land and owner are subject to general laws relating to taxation, common law and statutory land use restrictions, and other provisions that apply to the land at any time.

These kinds of limitations, in various forms, apply to much Crown-granted forest land in British Columbia. Grants issued over "patented lands" in 1887 and 1888 reserved to the Crown the timber itself; to cut the timber in commercial quantities grantees were once required to obtain a special timber licence. Later, the form of grant in use between 1888 and 1914 conveyed the timber, but the Crown reserved a royalty on timber harvested.

These qualifications to title are the most significant of those that are actually expressed in the grant, and the other important limitations have been set out in statutes, to be read with the grant. Timber cut from lands granted since March 12, 1906 is required under the Forest Act to be manufactured in the Province, unless specifically exempted. Similarly, royalty on timber cut from lands granted since March 2, 1914 was initially reserved under the Timber Royalty Act of that year and the rates payable have been revised from time to time, by amendments to the Forest Act.

By issuing a grant over forest land the Crown

relinquishes a good deal of control over the nature of the activities which may be conducted on it, so, generally, the public can influence forest practices on Crown grants only through legislation. The forest protection measures set out in the Forest Act, limiting burning and other activities during the close fire season, apply to private lands as well as to Crown land. As well, the Minister is empowered to require the owner of Crown-granted forest land to stock his property with commercially valuable species; but this power to require reforestation has never been exercised.

A considerable range of other legislation impinges on the rights of private owners. Crown grants that lie within municipalities are subject to all the levies and restrictions on land use that may be applied by local government under the Municipal Act,[10] and all the general statutory provisions relating to highways, water, fisheries, taxation and so on apply as well.

Crown Charges

The taxes, rentals, royalties, stumpage charges and other fiscal devices that apply to forests in British Columbia are to be examined in detail elsewhere, and need only brief

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10. R.S.B.C. 1960, c. 255, as amended.

mention here for completeness. No royalty on timber was reserved by the Crown in granting lands until April 7, 1887. Since the Esquimalt and Nanaimo Railway Belt was conveyed by the Province in 1884, no royalty is payable on timber cut from those lands still in private hands, and these account for the bulk of the acreage now in the royalty-free category. On lands granted after April 6, 1887 and before March 2, 1914, a royalty of 50 cents per M fbm (30 cents per cunit) for sawlogs was prescribed in the grants. This rate, which is also set out in the Forest Act,[11] has never been altered.

Royalties on grants since 1914 have not been reserved in the grant document but were imposed under the Timber Royalty Act[12] of that year and later in the Forest Act.[13] These statutory rates have hitherto been the same as those applied to the old temporary tenures and have been revised from time to time so that they are now considerably higher than the rate applicable to the older grants. For example, the current rates, which vary by species, grades and region,

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11. Op. cit., s. 57; s. 60(2) prescribes a special rate for pulpwood.

12. S.B.C. 1914, c. 76.

13. Op. cit., s. 58.

range from $1.10 to $5.10 per cunit.[14]

Crown grants that lie outside municipalities are subject to the provincial property tax and those lying within municipalities are liable to municipal taxes.[15] Both categories are subject to school tax,[16] while some of those outside municipal boundaries may also be assessed and taxed by Improvement Districts, Fire Protection Districts and other local authorities.

The annual forest protection tax of 12 cents per acre is levied on private timberlands not included in Tree Farm Licences, while those within these licences or within Taxation Tree Farms established under the Taxation Act[17] carry a rate of 10 cents per cunit of the allowable cut contributed by these lands.[18]

In 1950, following a constitutional reference to the

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14. Ibid.; the Forest Act Amendment Act, 1974, S.B.C. 1974, c. 36, s. 13, which at the completion of this paper has not yet been proclaimed, provides that these royalties may be appraised and assessed by the Forest Service, unless otherwise provided by regulation.

15. Taxation Act, R.S.B.C., 1960, c. 376; Municipal Act op. cit.

16. Public Schools Act, R.S.B.C. 1960, c. 319 (as amended), ss. 198 - 211.

17. Op. cit., c. 38.

18. Forest Act, op. cit., s. 126(1)(a), (3)(a),(b).

Privy Council in 1949,[19] the Legislature passed the Esquimalt and Nanaimo Railway Belt Land Tax Act[20] which imposed a once-only tax of 25 per cent on the value of E. & N. Lands sold by the railroad company after 1946. All of the belt has now been transferred from the E. & N. Railway Company in one manner or another, so that all of the tax has been levied. While this Act remains in force it no longer has any application, except with respect to deferred payment of the tax.

Taxation Tree Farms

In 1951 owners of Crown-granted forest land were given an incentive to practice sustained yield forestry. By depositing a plan approved by the Forest Service, ensuring that the lands will be maintained continuously for timber production as sustained yield units (Tree Farms) the owner can benefit from a relatively narrow tax base defined in the Taxation Act. The value of Tree Farm land for tax purposes is assessed solely with reference to its capability of producing timber, and all other potential uses - for example for residental use - which may tend to contribute to their

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19. A.-G.B.C. v. Esquimalt and Nanaimo Railway Company and Others, [1950] A.C. 87 (P.C.); [1949]2 W.W.R. 1233; 64 C.R.T.C. 165; [1950]1 D.L.R. 305.

20. R.S.B.C. 1960, c. 133.

market value are ignored.[21] In addition improvements on the land designed for growing and harvesting activities are exempt from tax.[22] Finally, the tax rate is established at 1 per cent, in contrast to the 1-1/2 per cent rate applied to "timberland" or the 3 per cent rate on "wild land".[23]

Taxation Tree Farms cover only private land, and should not be confused with Tree Farm Licences, which are described below. These two forms of sustained yield sometimes overlap, when a Tree Farm Licence includes Crown-granted land which has been established as a Taxation Tree Farm.

Current Status

Crown grants of timberland today comprise only a static 6.3 million acres or 5 per cent of the forest land in the Province, but they are considerably more important than their area suggests. They accounted, in 1973, for nearly 15 per cent of the total timber harvest in the Province; they encompass some of the most valuable timber and most productive forest lands, and they are concentrated near population centers where conflicts in land use are

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21. Taxation Act, op. cit., ss. 38, 39.

22. Ibid., s. 24(t).

23. Ibid., s. 50(1)(a).

most critical.

Crown-granted lands, because of their permanency and the scope of the rights conveyed, are undoubtedly the most secure form of tenure. Correspondingly, the scope for Crown control of land use activities is most severely constrained. Only through legislation can the Crown alter the rights of the owner, including his liability to pay taxes and charges.

OLD TEMPORARY TENURES

The colonial Land Ordinance of 1865 marked the beginning of a different timber alienation policy - the granting of rights to harvest without severing the Crown's title to the land. The so-called old temporary tenures, introduced to convey these harvesting rights in the form of Timber Leases, Pulp Leases, Timber Licences and Pulp Licences, were issued by the Province until 1907. Timber Berths also fall in this category although their origin was different: they were initially issued by the federal Crown on lands transferred to the Dominion in aid of the construction of the trans-continental railway. When the Dominion's interest was conveyed back to the Province in 1930, the Province assumed responsibility for the remaining berths and has administered them under arrangements similar to those of the other old temporary tenures.

Purpose and Intent

In contrast to Crown grants, the old leases and licences were explicitly and consistently issued for the purpose of providing rights to extract timber in order to facilitate development of the forest industry. During the four decades preceding 1907, the use of forest tenure policy to stimulate industrial development was evidenced in a variety of qualifications to the harvesting rights issued. Speculative acquisition and retention of licences and leases was, for a

time at least, discouraged. Indeed, these tenures were undoubtedly aimed at preventing the kind of speculation in resources that was often associated with early Crown grants. Some tenures required the holder to construct and operate a mill. Financial incentives encouraged manufacture in the Province and later, exports of unmanufactured timber were restricted by legislation. The old temporary tenures were thus designed to promote the economic development of the Province while retaining the Crown's title to the natural resources. And the Crown was to appropriate the public financial interest in the timber through royalties and other levies.

Allocation Procedure

As with Crown grants of timberlands, alienations of new cutting rights in the form of old temporary tenures are obsolete, and hence are of secondary interest here. It is sufficient to note that the early leases were allocated largely on a first come, first served basis to persons who located them on ungranted or unpreempted Crown land, subject to the qualifications relating to construction and operation of manufacturing facilities imposed by Timber and Pulp Leases. For a time, from 1891, Timber Leases were to be sold by competitive tender.

Rights and Obligations

The legal character of each of the old temporary tenures - the several forms of leases, licences and timber berths - is unique in certain important respects, but they have some general characteristics in common. They are not tantamount to grants of Crown land in fee simple: they have limited duration and, if they are not renewed, or as their inventory of timber is liquidated, they expire. Further, they provide the right to use the Crown land for a limited purpose only - namely to cut and remove timber - and not for any other purpose.

The oldest form of the early temporary tenures is the Timber Lease, of which there are 95 still in good standing, varying considerably in size and averaging slightly more than a thousand acres (see Table 6). All have terms of 21 years. Thirty-three expired and were renewed between 1964 and 1966, the remainder in 1972.

Pulp Leases were granted only for a short period between 1901 and 1903. They have many of the characteristics of Timber Leases, but were designed to serve the needs of pulp mills rather than sawmills. As a result, they are considerably larger, and the 33 still in good standing average over 9 thousand acres in area. All were renewed for 21 years in 1954. Pulp Leases and many Timber Leases were

explicitly designed to encourage manufacturing, so their holders were required to maintain and operate an appurtenant pulp mill or sawmill respectively. Today only Pulp Leases contain an appurtenancy requirement.

Timber Licences, in contrast, were introduced to accommodate independent loggers, and so have never carried a mill requirement. They are much less secure, insofar as their term is only one year. They were mostly one square mile (640 acres) in area when first issued, but now average about 500 acres largely due to reversion to the Crown of cutover parts. During the feverish rush for timber between 1905 and 1907 some 15,000 Timber Licences were issued, of which 2,219 remain in good standing. These licences remain by far the most important form of old temporary tenures, covering more than a million acres.

The 221 Pulp Licences were originally Timber Licences, converted between 1919 and 1921 under special provisions that gave the licensees who wanted to remove pulp timber the same advantages in terms of royalty and renewal fees that Pulp Leases offered over Timber Leases. This is the smallest category of old temporary tenures: they now average 467 acres and in total cover only 103 thousand acres.

The Timber Berths were inherited by the Province with

the return of the Dominion Railway Belt to provincial control. There are still 105 of these berths in good standing, averaging 1,566 acres and in total covering 164 thousand acres. Each carries a renewable one-year term.

Regulation of Forest Practices

The tenure documents themselves set out certain obligations, and regulate the logging practices of their holders. Timber Licences, Timber Leases and Pulp Licences give the District Forester power to require submission of an operating plan, setting out the sequence in which logging operations will be undertaken. In addition, some provisions are made for utilization and other standards in these tenures: the stump height may not exceed the diameter of the stump; the District Forester may prescribe utilization standards for tops; the holder is required to avoid damaging young growth and trees left standing; and specific measures encouraging streambank protection and removal of damaged trees are set out. Pulp Leases contain none of these conditions. The holders of Timber Berths may be required to remove damaged trees (if they can do so without incurring a loss) and are obliged under a very general provision to utilize all timber cut, "fit for use".

Many of the old temporary tenures are now integrated into Tree Farm Licences, as Table 6 shows. The Forest Service requires submission of proposed working plans for

TABLE 6

OLD TEMPORARY TENURES IN GOOD STANDING

(January 1974)

	Within T.F.L.'s		Outside T.F.L.'s		Total		Average Size in Acres
	number	acres	number	acres	number	acres	
Timber Leases	71	81,847.80	24	24,870.64	95	106,718.44	1,123
Pulp Leases	18	195,792.92	15	104,821.19	33	300,614.11	9,110
Timber Licences	1,222	590,999.12	997	512,144.39	2,219	1,103,143.51	497
Pulp Licences	165	72,723.18	56	30,541.00	221	103,264.18	467
Timber Berths	5	3,787.80	100	160,649.45	105	164,437.25	1,566
Total	1,481	945,150.82	1,192	833,026.67	2,673	1,778,177.49	665

Source: B.C. Forest Service

these sustained yield units at 5-year intervals, and these plans must cover operations in any old temporary tenures included. In addition, applications for Cutting Permits - specifying provision for roads, utilization, reforestation and so on - must be submitted for approval of immediate operations, including operations on these tenures. The inventory data for timber under old temporary tenures in these applications has not, however, been as detailed as that for other Crown timber because it has not hitherto been needed for appraisal purposes (see below). Harvesting operations on old temporary tenures outside Tree Farm Licences in many cases must be authorized also, but in practice the Forest Service has not required these logging plans to be in the same detail as for those lying inside Tree Farm Licences.

Operators liquidating old temporary tenures may be responsible for reforestation of the licence areas, but the nature of this obligation has not yet been set out in the tenure documents or regulations.[24] The forest protection provisions of Part XI of the Forest Act apply to these tenures as well, regulating a variety of forest activities.

Logging on old temporary tenures lying both within

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24. Forest Act, op. cit., s. 153.

and outside Tree-Farm Licences must conform to the logging "guidelines" prescribed by the Forest Service, which apply to operations on all Crown land. These "guidelines" are designed to protect the environment, coordinate road construction programmes, accommodate other forest uses, abate fire hazard, and provide for reforestation.

Crown Charges

Hitherto, the same schedule of royalties set out in the Forest Act applicable to lands granted by the Crown since 1914 has applied to timber cut from the old temporary tenures. A recent amendment to the Forest Act would repeal this schedule and would give the Forest Service the power to determine these charges on a tract by tract basis, in the same manner in which stumpage is appraised for other Crown timber.[25]

Annual rental fees are payable on Timber Leases, Licences and Berths at the rate of 50 cents per acre, on Pulp Licences at the rate of 25 cents per acre and on Pulp Leases at the rate of 11 cents per acre.[26] Forest protection tax is levied under the Forest Act, and the special forest

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25. Forest Amendment Act, 1974, op. cit., s. 36; see footnote 14, p. 31.

26. Forest Act, op. cit., s. 43; B.C. Regs. 94/68; 97/69.

land tax of 1 per cent of assessed value is payable annually, under the Taxation Act, on those tenures not included in Tree Farm Licences.[27]

Appurtenancy and Export Restrictions

Pulp Leases are stipulated to be appurtenant to a pulp mill designated by the Minister, and this designation may be changed from one pulp mill to another with the Minister's consent. The mill facilities must be capable of producing daily at least one ton of pulp or one-half ton of paper or chemical pulp, for each square mile covered by lease. None of the other forms of old temporary tenure now require appurtenant manufacturing facilities.

Because the areas covered by these tenures are Crown lands, the timber cut from them must be manufactured in the Province under Part X of the Forest Act, unless the Lieutenant-Governor in Council issues a permit for export.[28]

Term and Transferability

Timber Licences, Pulp Licences and Timber Berths may

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27. Taxation Act, op. cit., ss. 2, 35, 50(1)(a); the exception is provided by s. 24(n).

28. Provincial export policy is discussed in Task Force on Crown Timber Disposal, Timber Appraisal, Victoria, 1974, pp. 130 - 133.

be renewed by the Minister, whose policy has been to renew them on application for periods of one year, provided they contain merchantable timber "in sufficient quantity to make it commercially valuable."[29] The terms of the tenures held by a few large corporations have been adjusted in the tenure documents, and now carry varying terms - some extending to the year 2013. Timber and Pulp Leases valid on August 1, 1964 may be renewed on expiry for a period not exceeding 21 years.[30]

However, if a cruise discloses that lands covered by one of these tenures does not contain timber which was on the land when the tenure was first issued (that is, "old growth" timber) in sufficient quantities to make it commercially valuable then it automatically expires at the next renewal date. Portions of the lands containing no old growth timber may be deleted from the licence or lease at any time, but in practice such deletions are made on the anniversary date when annual rental is payable.[31] Thus once the area covered by the tenure, or any portion of it, has been logged once, the licensee or leasee has no further interest in subsequent crops (unless the land forms part of a Tree Farm Licence, as explained below).

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29. Forest Act, op. cit., s. 41.

30. Statute Law Amendment Act, 1974 (No. 2), S.B.C. 1974 c. 114, s. 5(b).

31. Ibid., s. 41(3),(4),(5).

As a rule old temporary tenures may not be transferred without the consent of the Minister,[32] but Pulp Licences not included in Tree Farm Licences may be sublet, assigned or transferred to an operator or owners of a pulp mill in the Province.[33]

Current Status

Since the initial date of issue, almost all of the old temporary tenures have been validly transferred from one party to another one or more times. Moreover, as the forest industry - particularly on the Coast - has become increasingly integrated and concentrated, these tenures have correspondingly become concentrated in the hands of a few large corporations. Nearly 80 per cent of the total acreage under old temporary tenures is now held by or on behalf of five large timber firms.

The area under old temporary tenures has declined to about 15 per cent of the acreage covered in 1907, and continues to decline as they are logged off. Nevertheless, like Crown-granted forest lands, the fraction of the Province's forest land covered by old temporary tenures is an inadequate

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32. Ibid., ss. 37(1)(a), 41(2) and 36(11)(which is somewhat ambiguous on this point); B.C. Regs. 94/68; 97/69.

33. Ibid., s. 49(4).

measure of their relative importance. While they now cover less than 2 per cent of the forest land in the Province, they account for more than 15 per cent of the total harvest, and the quality and value of the timber included in them are, on the average, considerably higher than other Crown timber. They are especially important in the Vancouver Forest District which contains more than 70 per cent of the total acreage held under these tenures, and where they accounted for more than 28 per cent of the total volume harvested in 1973.

TIMBER SALE LICENCES

In 1907 the government discontinued granting harvesting rights under old temporary tenures, and by Order-in-Council the timber that remained unalienated by either Crown grant or temporary tenures was placed under reserve and was thereby protected from disposition. The only means of making new dispositions, through Handloggers Licences, was of minor importance.

The Royal Commission of 1910 could only guess at the extent of the forest resources of the Province, but they estimated that two-thirds of the merchantable forest land had already been alienated, leaving perhaps 3-3/4 million acres in reserve.[34] With an annual production rate of 1 billion fbm per year, and two-thirds of the 240 billion fbm of timber already alienated, the Commission concluded that no further alienations would be necessary for some time, except in special circumstances. For these exceptions, the Commission recommended a method of disposal which became known as "Timber Sales" and was, with minor exceptions, the only method of allocating new harvesting rights until 1947. By then, this new system was being used much more widely than the Commissioners of 1910 had envisaged, although much -

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34. Fulton Report 1910, p. D-16.

29 per cent of the provincial cut - timber was still produced from old temporary tenures. Today, however, Timber Sale Licences, and variants of this form of tenure, are the main instruments for disposing of Crown timber outside Tree Farm Licences.

By the time the second Royal Commission on forestry began its investigations in 1944, 3,702 Timber Sale Licences were current, covering approximately 280 thousand acres. In the preceding decade the harvest under this form of tenure accounted for 14.5 per cent of all Crown and private timber cut in the Province, and contributed 34.5 per cent of all forest revenue. Its use grew rapidly. By 1956, 7,137 sales were outstanding, covering over 3.2 million acres, and earning revenues of approximately $56 million. In 1973 Timber Sales (of all the various forms discussed in this section) covered 50 per cent of the Crown timber cut in the Province and 67.6 per cent of that outside Tree Farm Licences.

Purpose and Intent

The Royal Commission of 1910 saw two reasons for making exceptions to their general recommendation that the unalienated timber be retained in reserve. First, they were aware of fringes and corners of timber adjoining alienated tracts that should be removed as the lease or licence was logged, and of fire-damaged stands that should be salvaged.

Second, with remarkable foresight they feared that much of the timber already alienated might become concentrated in the hands of non-operating speculators, or that a combine of operating tenure-holders could restrict market competition.[35] It was thus for the purpose of maintaining market integrity, as well as providing for efficient harvesting, that the Commissioners recommended a procedure for alienating timber that was otherwise under reserve.

> Each berth, after exploration by the forest officers, should have its boundaries fixed by actual survey. The timber should be cruised and an upset price fixed per thousand feet for each important species. The licence to cut timber on the berth should then be sold by public auction, the bids being the amounts per thousand feet that applicants would pay in addition to the royalty as and when the timber is cut. A cash deposit of at least ten per cent. (10%) of the total bonus he had offered should be made at once by the purchaser, as a guarantee that operations will be conducted in accordance with the regulations. The annual renewal of the license should be subject to the same rental per acre, and to the same conditions and penalties, as those imposed, by the provisions of the "Land Act" then in force, upon the special licensees of the Province.
>
> In all such sales it should be made a condition of the license that the timber should be removed within five years.
>
> In order to avoid loss to the Province, reserved timber damaged by fires should be sold by auction, in the manner described above, for removal within a three-year period. Areas to be sold should be divided into natural logging berths and also into square mile units. Alternative tenders should be required from each applicant.[36]

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35. Fulton Report 1910, p. D-55.

36. Loc. cit.

These recommendations were substantially incorporated in the first Forest Act, enacted in 1912.[37] The Act required that an area proposed for sale be surveyed and that its timber be "cruised and classified". Sales were preceded by advertising in the British Columbia Gazette for at least three months, and bids were offered by way of sealed tender, accompanied by a deposit of at least 10 per cent of the bid price. In addition to the appraised upset price fixed by the Forest Service a successful applicant was obliged to pay to the Crown any bonus bid above the upset price, the costs of advertising, cruising and survey, annual rental at the same rate as applied to Timber Licences, and royalty.

The escalating royalty provisions of the Timber Royalty Act, 1914,[38] applied equally to Timber Sale Licences as they did to the old temporary tenures, from 1915 through the erratic periods of their postponement until their eventual repeal in 1924. During this period of rising royalties the effective minimum stumpage payable by licensees rose as well.

Over the decades since the Royal Commission's recommendations for allocating timber by means of short-term competitive sales were implemented in 1912, the Timber

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37. Forest Act, S.B.C. 1912, c. 17.

38. Op. cit.

Sale system has become not just a means of dealing with the special problems foreseen by the Commission but rather a major device for serving the needs of an expanding forest industry. Before the introduction of sustained yield policies in 1947 Crown timber was allocated through Timber Sales almost without restriction in response to applications. Today, however, most sales are within Public Sustained Yield Units, and are therefore made only insofar as allocations are consistent with sustained yield cutting plans. Restrictions on sales have been accompanied by governmental measures that give established operators a preferred position in obtaining continuing supplies of timber through the informal "quota" system; which, in addition to special privileges provided to existing licensees through legislation, have substantially eroded the competitive feature of most forms of Timber Sales.

Forms of Licences

A rather confusing variety of disposal arrangements have evolved under the general statutory provisions for this form of tenure in Section 17 of the Forest Act.

> The Minister or any officer of the Forest Service authorized so to do by the Minister may from time to time, at the instance of any applicant, or otherwise, advertise for sale and sell by public competition in the manner prescribed in the regulations a licence to cut and remove any Crown timber which is subject to disposition by the Crown.[39]

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39. Forest Act, op. cit., s. 17(1).

The contracts now used by the Forest Service pursuant to this broad authority vary significantly to serve different purposes, and the main forms now in use require brief explanation.

Ordinary Timber Sales. The kind of Timber Sale advocated by the 1910 Royal Commission became the most important vehicle for new dispositions of Crown timber and remained so until the new forms, discussed below, were introduced during the last seven years. Today, there are some 1,800 sales of this form outstanding, and new dispositions of this form continue to be made, mainly as a means for allocating the regulated harvests in Public Sustained Yield Units.

The term "ordinary" Timber Sales is used here somewhat arbitrarily, to distinguish the more traditional form of sale from the other important forms discussed separately below. Nevertheless it includes a wide variety of arrangements. The oldest form, still in use, is a licence that authorizes the licensee to harvest a prescribed tract of timber, without any further authorizations required. A second form conveys the right to harvest a prescribed tract, but the licensee is required to obtain authorizations in the form of Cutting Permits (described below) before he may commence operations in any part of the licensed area. A third form does not

convey a right to the timber on any geographical area, but rather the right to an annual harvest volume. These licences require Cutting Permits which, when issued, provide the licensee's only claim over particular stands of timber. This third form, like Timber Sale Harvesting Licences (see below) which embody the same principle, has increasingly been used, reflecting a general trend toward licensing volumes rather than areas.

The term of ordinary Timber Sales is typically five years or less; some are as short as one year and others issued in the 1950's are as long as 20 years. They carry detailed and flexible terms and conditions, and may be allocated by a variety of methods discussed below.

Pulpwood Timber Sales. At an early stage the Forest Service developed special provisions for providing timber best suited for pulping to existing or planned pulp mills. A Pulpwood Timber Sale Licence could be issued, at the Minister's discretion, to applicants who had spent at least $350 thousand in pulp mill development or who had posted a $50 thousand bond against future pulp mill construction. These sales could be very large - sufficient to provide up to a 5-year wood supply for the appurtenant mill. The rental charged is one-half that of ordinary sales but may be revised upward to the extent that sawtimber is produced

from the licenced area.

Today, there are approximately 20 Pulpwood Timber Sale Licences in force, covering approximately 45,000 acres and carrying terms of from 3 to 12 years. None have been issued since 1971; and this tenure has become redundant as new tenure forms have been developed.

Timber Sale Harvesting Licences. Since its introduction in 1967, the Timber Sale Harvesting Licence has developed as an important method of allocating the regulated harvest of Public Sustained Yield Units. These licences are granted under the same legislation (Section 17 of the Forest Act) as ordinary sales and basically the same alienation provisions apply to both forms.

The broad purpose of this form of tenure has been explained to be to "... permit the operator to play a larger role in the management of the public sustained-yield units and at the same time, provide him with as much flexibility as possible."[40] These new licences enabled operators to consolidate operations previously scattered among several short-term sales in a Public Sustained Yield Unit, and to plan their harvesting to meet their mill requirements over

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40. British Columbia Forest Service, Annual Report, 1967, Queen's Printer, Victoria, 1967, p. 33.

a longer period.

These licences confer the right to a prescribed annual harvest for the term of the licence, which is typically 10 years. Thus, in contrast to traditional Timber Sales, the Timber Sale Harvesting Licences in force today do not specify a geographical area. Rather, they commit the Crown to make available an annual volume of timber within a particular Public Sustained Yield Unit, and the licensee must apply for successive Cutting Permits for particular tracts as his logging operations proceed over the term of his licence.

When the Forest Service advertises one of these licences, the formal advertisement does not indicate the geographic locations from which the timber may be cut. But a small-scale map is distributed to all persons holding licences in the Public Sustained Yield Unit and to any other known interested parties, outlining the proposed development area from which the applicant would prefer to cut timber, if granted the licence. The area would encompass a volume of timber estimated to fulfill the terms of the licence, with due allowance for anticipated environmental and other timber harvesting constraints. Although this procedure does not give the applicant or subsequent licensee any exclusive rights over the timber in the area, it assists the licensees

in the management unit to project their activities in development plans.

A three or five-year development plan, prepared by the licensee and subject to the approval of the Forest Service, determines the configuration of cutting areas in which the licensee applies for Cutting Permits within the sustained yield unit. The development of roads systems, reforestation and fire protection arrangements as well as the actual logging sequence are covered in the plan and are part of the licensee's obligations under this form of tenure. This feature represents a significant departure from timber sale policy insofar as licensees of ordinary timber sales are rarely required to prepare development plans that embody comparable management responsibilities.

Upset stumpage, inclusive of royalty, is appraised by the Forest Service as individual Cutting Permits are issued, and any bonus that may have been bid by the licensee when the licence itself was issued is added to the appraised stumpage price. The other levies applicable to ordinary sales apply also. As in the case of ordinary sales, applicants with established "quota" positions are given preference in the allocation procedure (see below). As a result, in practice the Forest Service lets these licences only to licensees with established "quota" positions, many of whom are sawmill owners. Some contracts refer to an

"appurtenant mill" which must be maintained and operated by the licensee with certain utilization features (even though the licenced timber need not necessarily be processed in that mill). Licensee's "quota" positions were, indeed, determined initially by the requirements of their mills.

Special Timber Sale Harvesting Licences. From 1965 to 1969 four Timber Sale Harvesting Licences in the northern Interior were issued to confer harvesting rights for 18, 19 and 21 years. Under the two 21-year licences the licensees agreed to construct and operate pulp mills having a stipulated capacity, and stumpage was limited to the pulpwood rate for the initial years of their terms.

In 1973 another special form of Timber Sale Harvesting Licence carrying 12-year terms was introduced to allocate timber in Public Sustained Yield Units in the northern part of the Province where the full allowable cut was not fully committed under "quotas". To date, only four of these new licences have been issued. Apart from their 2-year longer term, they differ from conventional Timber Sale Harvesting Licences in two important respects: their link with proposed development of manufacturing facilities, and the method of bidding and allocation among competitive applicants.

Since the licences issued hitherto have allocated

timber where no "quota" positions were established, no applicant was given preference over another. Those submitting tenders are required to bid a lump sum - not an amount per cunit of each species as in competitions for ordinary sales. The bonus bid is expressed in cents per cunit for the total 12-year volume licenced and must be at least five cents per cunit. Bidding fees are payable at the time of bidding, and typically amount to a substantial outlay; but this "earnest money" is returned to unsuccessful applicants. Bidding is, in effect, a competition for a licence which effectively establishes a "quota" position by conveying a right to apply for a succession of Cutting Permits over 12 years without further competition.

A tender must include a proposal for construction of a sawmill capable of using timber to close utilization standards, with details of its design, construction and operating costs, manpower requirements, proposed waste control systems, marketing and distribution systems, and construction schedule and expenditures. Preference is given to proposals including the "optimal combination of employment, social benefits, wood utilization and revenue", although the definition and weight ascribed to each of these factors is not clear.

These licences thus require an "appurtenant mill",

as do some of the other Timber Sale Harvesting Licences. In one instance the licenced harvest is intended to serve 80 per cent of the mill's requirements, the remainder to be acquired from other sources.

"Third Band" Sales. Originally, the regulated harvest in Public Sustained Yield Units, "quotas", and the timber allocated under harvesting licences were all calculated to "intermediate utilization" standards.[41] As logging and manufacturing technology developed, and particularly as the pulp industry expanded in the Interior in the 1960's, the Forest Service encouraged adoption of the "close utilization" standard,[42] which involved removal of smaller trees, more of the stumps and tops, and more defective pieces. Utilization of this material typically requires changes in manufacturing facilities. The encouragement, in the form of incentives of various kinds, has resulted in adoption of the new standard throughout most of the Interior and to a large extent on the Coast as well.

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41. The "intermediate utilization" standard requires removal of all parts of trees between an 18-inch high stump measuring 14 inches or more in diameter on the Coast or 12 inches in the Interior and an 8-inch top, except those pieces which are less than 50 per cent sound wood. Broken pieces that can be cut into at least 8-foot lengths with an 8-inch top must also be removed.

42. The "close utilization" standard specifies a stump 12 inches high and 9.1 inches in diameter on the Coast or 7.1 inches in the Interior (breast height) and a 6-inch top diameter.

When timber inventories and allowable harvests are calculated to the "close utilization" standard they are inevitably larger - and in the cases of stands containing small and defective timber, often twice as large. Thus, when the Forest Service recalculated allowable harvests using the close standard, which involves also a shorter growing or rotation period, the annual rate of cutting which could be sustained was considerably higher than that committed under "quotas" based on the "intermediate utilization" standard. The government offered a strong incentive for adoption of the closer standard, and at the same time allocated much of the additional harvest that consequently became available, by increasing the "quotas" - by one-third in the Interior and by one-half on the Coast - of licensees who elected to log to "close utilization" standards.

This incentive allowance is therefore capable of increasing the annual harvest rate in Public Sustained Yield Units by a maximum of one-third in Interior units and one-half on the Coast: but typically the new allowable harvests calculated to "close utilization" standards indicated a yet larger cut was available. This additional timber that became available for cutting, in excess of the "close utilization" incentive allowances added to "quotas", varies widely among Public Sustained Yield Units depending upon local timber characteristics. It has become known as "third band" volume.

As a matter of policy, the Forest Service usually makes the "third band" available only if at least 80 per cent of the current harvest from the relevant Public Sustained Yield Unit is being logged to the "close utilization" standard. It has been allocated by ordinary Timber Sales of the form which provides rights for up to five years over a prescribed area, but recently "volume" type Timber Sales have been adopted for new allotments. Under Forest Service policy bidding on "third band" sales is frequently restricted to lumber manufacturers who require the volumes to maintain their "close utilization" manufacturing facilities at some stipulated rate of production, or to logging operators who have a timber supply arrangement with such lumber manufacturers. Subject to the demonstrated requirements and performance of licensees, and to possible downward revisions in the calculated annual allowable cuts for the Public Sustained Yield Units, "third band" allocations are usually replaced by new Timber Sales as they expire. These sales are not normally subject to competitive bidding procedures: bids received from parties other than the applicant for the sale are usually rejected.

Minor "third band" volumes have been incorporated into (or "locked into") "quota" arrangements, but generally they are not carried as "quota". Finally, applicants are required to maintain the barking and chipping facilities necessary to mill timber to the "close utilization" standard,

and to enter into an agreement for the sale of residual chips with a designated pulp mill, if the timber is included in a Pulpwood Harvesting Area. These latter arrangements are amplified below.

In Table 7 the percentages of the 1973 harvest from Public Sustained Yield Units under Timber Sale Licences, Timber Sale Harvesting Licences, and "Third Band" Licences are set out. The Timber Sale Harvesting Licence is the most important category in both the Coast and Interior. "Third Band" Licences are used almost exclusively in the Interior.

TABLE 7
DISTRIBUTION OF HARVEST
FROM PUBLIC SUSTAINED YIELD UNITS
BY MAJOR FORMS OF LICENCE[1]

Forest District	Ordinary Timber Sale Licences	Timber Sale Harvesting Licences	"Third Band" Licences
	- per cent of total volume cut under sales -		
Vancouver	23.2	75.5	1.3
Prince Rupert (Coast)	23.5	76.5	-
Prince Rupert (Interior)	9.4	53.3	37.3
Prince George	2.9	51.6	45.5
Kamloops	3.0	58.1	38.9
Nelson	3.6	62.6	33.8
Cariboo	1.4	55.4	43.2
All Districts	7.8	60.3	31.9

1. Excludes harvests from Special Sale Areas, Forest Service Reserves, Pulp Sales and non-"quota" sales.

Source: B.C. Forest Service.

Allocation Procedure and the "Quota" System

The Forest Act[43] and Regulations[44] prescribe the procedures to be followed in making sales of Crown timber. Sales are to be by competitive bidding, following public advertisement. The Forest Service may advertise a sale at the request of an applicant "or otherwise", but an application may be disallowed by the Minister.[45]

Sale by Competition. The Forest Act specifies that sales may be made either by public auction or by sealed tenders. Public auctions are often not held because a recognized applicant may request that a sale be made by sealed tender, in order that he may protect his "quota" position by matching bids higher than his own. Thus the "quota" system itself militates against public auctions in the majority of cases, and it is mostly when timber sales do not involve "quota" that auctions are used. These instances include sales of timber lying outside Public Sustained Yield Units and salvage and special sales where the Crown wishes to make a once-only sale of certain volumes, and sales of minor or special products. "Third band" sales are

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43. Op. cit., s. 17.

44. Regulation Governing the Sale of Crown Timber, B.C. Regs. 85/65; 99/67; 112/71.

45. Ibid., s. 5.01.

also open to competition by auction, but only among applicants who hold harvesting rights conferring annual rates of harvest at least equal to the volume being sold.

In the normal course of events an applicant for a Timber Sale Licence applies to the Forest Service for rights to harvest a prescribed tract of timber. If the proposed harvesting is consistent with the Forest Service's management plans for the area, that agency calls upon the applicant to make a cruise of the area to standards specified by the Forest Service. With respect to competition for sales, bids may be submitted as a "bonus over upset"; which represents a premium, per unit volume harvested, over and above appraised stumpage. Competition rarely bids the stumpage above upset; in 1973 it occurred in only 2.6 per cent of all sales, accounting for 1.4 per cent of the total volume sold.

Allocation by "Quota". Although the Forest Act prescribes competitive arrangements for sales, competition rarely occurs; in part because the Forest Service has adopted an informal "quota" system for established operators in Public Sustained Yield Units where the allowable cut is fully allocated. As a matter of policy, whenever the demand for harvesting rights exceeds the allowable harvest, the government has given preference to established operators.

The current informal "quota" policy is one of the means of protecting established operators. Basically, it involves treating each licensee operating in a Sustained Yield Unit as eligible to apply for additional sales, such that he can maintain a certain annual harvest, based on his past rate of cutting in the Unit. The total harvest committed in this manner could not, of course, exceed the total allowable cut for the Unit, and in some cases the "quotas" have had to be reduced proportionally.[46]

The Forest Act does not specify any limitations or qualifications for applicants for sales, but in order to implement the "quota" system the Forest Service has designed priorities for acceptance of applications received. Since the Minister need not accept any application for the sale of

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46. The Forest Service experimented with and discarded two administrative techniques for solving this problem before finally opting for the "quota" arrangement. First, a "supply system" was adopted, whereby applications were accepted only from established operators within a Public Sustained Yield Unit, and those having the shortest timber supply were given first priority. This system tended to favour applicants who cut their timber fastest, and so was discontinued in favour of the second scheme, a "licensee priority system". Under this procedure the cruise volumes under each operator's existing sale commitments were pro-rated over the remaining term of the sale to indicate the average annual amount he held the right to cut, and this "annual cut" was maintained by replacing the original sales by new sales. This scheme proved awkward, because it was difficult to exactly (or even by multiples) match the volumes in succeeding sales. The present

timber,[47] or may "reject any or all offers made for the licence",[48] there is considerable scope for discriminating among applicants. In practice, where the allowable cut of a Public Sustained Yield Unit is fully allocated, as is typically the case, only established operators with a "quota" position are recognized as "applicants".

Whenever the allowable annual cut in a Public Sustained Yield Unit is fully committed, a recognized applicant for a sale in that unit may request that the sale be made by sealed tender.[49] Anyone may submit a bid in this manner; but the recognized applicant may match any bid higher than his own. Thus an operator can maintain his "quota" position at a given annual rate of harvest by applying for new sales authorizing him to cut at that rate, as he performs under previously issued sales and those sales expire. His position can be eroded if he consistently harvests less than that authorized in the sales he holds, or to the extent that he fails to match the bids of others for new sales that he applies for.

"quota" system differs insofar as it attempts to perpetuate the licensee's right to harvest a certain volume of timber, but not by matching the cruised volumes authorized under successive sale contracts.

47. Regulation Governing the Sale of Crown Timber, op. cit., s. 5.01.

48. Forest Act, op. cit., s. 17(7).

49. Forest Act, op. cit., s. 17(1a).

"Quota" positions can be, and often are, transferred from one operator to another in this manner. A "recognized applicant" who wishes to "sell" his "quota" to another party can allow him to submit a tender bidding up by a nominal amount the price of new sales, and by not matching the bids the "quota" is effectively transferred, often in consideration of payment to the former "quota" holder.

The "quota" system has become an exceedingly important aspect of forest tenure policy. Roughly 60 per cent of Crown timber available for sale outside Tree Farm Licences, and 50 per cent of that in the Interior is "committed" in this way. But while a "quota" essentially relates to the right to apply for certain volumes of timber, it does not rest on any law. It is merely administrative recognition of some applications and not others that constitutes the "quota" allocation system. The Forest Act provides preferences to established licensees in the arrangements for sealed tenders and bidding fees which tend to reinforce the "quota" system.

For years the Forest Service deliberately avoided the term "quota", and refused to officially recognize continuing commitments to licensees beyond the term of their licences. Only recently the term has been used in official documents such as the Annual Report of the Forest Service; but it remains an informal administrative policy rather than any legal obligation on the part of the Crown.

Costs and Bidding Fees. Anyone competing for a sale, including the "recognized applicant", must submit a sum equal to the cost of advertising and cruising incurred by the Crown, forest protection tax and rental for the first year, and a security deposit.[50] This money is refunded to unsuccessful competitors.

Additional protection from competition is given to established "quota" holders through bidding fee arrangements. Where sales are made by sealed tender, a bidding fee must be paid to the Minister by everyone submitting a tender, except the "recognized applicant".[51] The fee is now 50 cents per cunit for the total volume authorized for harvest over the term of a Timber Sale Harvesting Licence, and for Timber Sale Licences it is the greater of $100 or 5 per cent of the total estimated value of the timber to be sold. In both cases the bidding fee is forfeited to the Crown where the bid of an operator who submits a bid higher than that of the "recognized applicant" is matched by the "recognized applicant".[52] Moreover, the fee is forfeited even if the sale is ultimately awarded to the person who submitted it,

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50. Regulation Governing the Sale of Crown Timber, op. cit., s. 2.03.

51. Forest Act, op. cit., s. 17(3a).

52. Loc. cit.

which effectively raises the cost of the sale above his bid. This can be a substantial deterrent to competition against the "recognized applicant": an outside competitor for a Timber Sale Harvesting Licence authorizing a ten-year annual harvest of 10 thousand cunits, for example, would incur a high risk of losing a bidding fee of $50,000, or would pay an additional 50 cents per cunit, over his successful bid. Bidding fees are not required for "third band" sales.

Rights and Obligations

All forms of Timber Sale contracts are agreements between the licensee and the Crown. Most of the terms and conditions are set out in the tenure document itself, while others are specified in the Forest Act.

Term. Timber Sale Harvesting Licences authorize harvesting for a period of ten years, except for the special 12-year licences and other unique cases. The slightly longer term of the 12-year licence provides assurance of wood supplies for a period long enough to depreciate a new mill, and to accommodate review of the licensee's performance at three-year intervals as provided in the contracts. The term of Timber Sale Licences varies, but five years is most common. "Third band" sales that are not "locked in" to "quota" arrangements are issued for terms of up to five years; many of those within Pulpwood Harvesting Areas bear one-year terms.

All forms of sales provide that the basic term may be extended at the Crown's discretion, and may be either suspended or cancelled if the licensee fails to perform his obligations, or becomes insolvent or bankrupt. "Third band" sales in the Interior specify that they may be revoked or their volume may be reduced, in two instances: if it is necessary to reduce the allowable annual cut of the Public Sustained Yield Unit, or if the wood supply is required by the holder of a Pulpwood Harvesting Agreement covering the Unit. (The relationship between these "third band" sales and Pulpwood Harvesting Areas is discussed later.)

Cutting Authority. All Timber Sale Harvesting Licences and most Timber Sale Licences confer rights to harvest stipulated volumes of timber annually from designated Public Sustained Yield Units. However, before beginning operations on any tract of timber the licensee must obtain a Cutting Permit issued by the District Forester. In this respect the licence may be viewed as a master agreement which sets out the basic rights and obligations of the operator and the Crown; while Cutting Permits issued pursuant to this master document set out the geographical limits and prescribe the terms and performance requirements for specific operations, typically covering three years. Cutting Permits set out utilization requirements and other details of logging operations, including slash disposal; specify the time by

which operations are to be completed; establish "upset" stumpage; and prescribe reappraisal procedures. The licensee is responsible for surveying the boundaries of Cutting Permits. Within twelve months of the execution of the sale document, but not less than three months before he intends to begin logging, the licensee must apply for his initial Cutting Permit. Six months lead time is required for succeeding applications.

In addition, the Cutting Permit requires the licensee to submit a cutting plan of the area, setting out specific features of proposed harvesting operations. Often called a logging plan, this document sets out detailed logging techniques and the regeneration programme to be undertaken, and must be prepared by a Registered Professional Forester.

Short-term Timber Sale Licences serve as both the master document and the cutting authorization. The licence describes the surveyed boundaries of the particular tract of land in which harvesting activities are to be conducted, as well as the other particulars normally found in Cutting Permits. This form of sale is not as common as in past years, and is restricted to "third band" and salvage sales.

In most cases the licence itself sets out certain general obligations of the licensee relating to logging

practices. For example, he is required to submit annually a fire protection "pre-organization plan", detailing his provisions for a standby suppression crew and equipment during the fire season of that year. Licensees' responsibilities for extinguishing fires under the Forest Act[53] extend only to those areas over which they have obtained Cutting Permits. Licences prohibit interference with water supplies for irrigation, drinking or domestic purposes; and operators are restricted from depositing debris into watercourses, conducting operations below the highwater banks of streams, and obstructing maximum streamflow.

Development Plans. Timber Sale Harvesting and "third band" licensees are required to submit development plans prepared by a Registered Professional Forester for approval by the Forest Service, describing in general terms proposed harvesting activities, and on site rehabilitation and protection measures. These documents are normally required to be prepared at intervals of three or five years. They must be approved before any Cutting Permit is issued and become a binding part of the sale document. They specify "cutting budgets", which are statements of the quantities of timber intended to be harvested and specify the sequence in which Cutting Permits will be applied for to cover specific

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53. Op. cit., s. 121.

tracts for each year of the plan. The licensee's actual cut must closely approximate the annual volume authorized in the master agreement (i.e. his licence) although variations within certain annual and three or five-year limits are tolerated without penalty or adjustment to succeeding "cutting budgets".

Roads. Development plans outline the licensee's planned location of all main and secondary roads as well as provisions for the maintenance of existing roads. Licensees are responsible for construction and maintenance of all new roads necessary to transport the timber cut. The Forest Service has the authority under these licences to set construction and maintenance standards, and to prescribe measures to protect the roads from deterioration. Compensation for costs of construction and maintenance of roads is provided through the stumpage appraisal procedures,[54] by direct offset against stumpage, or by direct payment from the Consolidated Revenue Fund.[55] Licences provide that the Crown may take possession of any such road without compensation, subject to the licensee's right to use it during the term of his tenure.

Manufacturing Requirements and Chip Direction. Many

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54. See Task Force on Crown Timber Disposal, Timber Appraisal, op. cit., pp. 105 - 108.

55. Forest Act, op. cit., s. 17(8a)(b).

of the Timber Sale Harvesting Licences and all "Third Band" Timber Sales in the Interior require the licensees to maintain and operate sawmills capable of utilizing timber harvested to "close utilization" standards, which must include barking and chipping facilities. Moreover, where the licences cover timber within Pulpwood Harvesting Areas (see below) the licensee is frequently required to sell the pulp chips and other sawmill residues he produces to a designated pulp mill under the "chip direction policy". Many "third band" sales specify the particular pulp mill, while the longer-term Timber Sale Harvesting Licences give discretion to the Minister to direct the chips as he sees fit.

Harvest by Contractors. A later section describes the so-called "contractor clause" in Tree Farm Licences, which is a device to encourage harvesting of licenced timber by contractors who are not associated with the licensee. This condition is incorporated into some Timber Sale Harvesting Licences and "Third Band" Timber Sales as well. It requires that the licensee must provide the opportunity to contractors, who are not employees of or significant shareholders in the licensee, to harvest a portion of the annual cut covered by the licence; this fraction is sometimes specified to be 50 per cent, while in other cases no quantity is prescribed. The Minister may waive this condition if independent operators are not available, or for any other "good and sufficient reason".

Stumpage, Royalty and Other Charges

Like timber cut from lands Crown-granted since 1914 and from old temporary tenures, timber harvested under the several forms of Timber Sale Licences is subject to royalty.[56] However, the statutory royalties are only the minimum rate payable by a sale licensee. In addition he is bound to pay

> such stumpage, inclusive of royalty and additional sums being not less than the upset price fixed by the Minister from time to time according to the terms of the licence, as the person making the offer is willing to pay for the privileges of the licence.[57]

Through this provision the licensee agrees to pay the appraised stumpage (which, except in special cases involving salvage sales, may not be less than statutory royalty) as well as any bonus he may have bid over and above upset stumpage.[58]

Upset stumpage is determined by appraisals of individual Cutting Permits. Thus whenever a licence covers a series of Cutting Permits any competitive bids for the licence when it is issued are expressed in dollars per cunit in excess of

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56. Forest Act, op. cit., s. 58(1).

57. Ibid., s. 17(3)(d).

58. The fixed statutory royalty rates appearing in ss. 58 and 60 of the Forest Act were amended in 1974, see footnote 14, p. 31. The effect of the amendment, when proclaimed, would be to effectively erase any distinction between stumpage and royalty for Timber Sales.

whatever appraised upset rates are later determined for each species. After each Cutting Permit is delineated and appraised, the "bonus bid above upset stumpage" is added to the appraised price to determine the licensee's liability on each cunit of each species removed and scaled.

In the few instances where Timber Sale Licences serve as cutting authorizations, their boundaries are surveyed and the site is specified before the tenure is granted. Here, stumpage is appraised before execution of the document, so that the document sets out the rate per cunit, payable to the Crown by the licensee, for the various species to be logged.

The tenure documents provide that stumpage charges will automatically be adjusted upwards and downwards with fluctuations in product selling prices according to a sliding scale; and each year over the term of a sale a complete reappraisal is conducted by the Forest Service, to reflect changes in costs through time.

In addition to stumpage, licensees are liable under the Forest Act[59] to pay a forest protection tax of 12 cents per acre covered by the licence; or, where the licence conveys

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59. Op. cit., s. 126(1)(c),(2).

a right to a volume of timber rather than a particular tract, the tax is 2 cents for each cunit of annual cut licenced.

Although these licences do not attract liability under either the Taxation Act or Public Schools Act, licensees are responsible for an annual rental of 50 cents per acre, based on the area of the lands set out in the licence. In the usual case where no specific area is designated in the licence a rate of 4 cents per cunit of annual cut set out in the licence is charged.[60]

All licensees are liable to waste assessment levies if they fail to meet prescribed utilization standards in logging. Material left on the ground which should have been removed under the terms of the licence may be scaled by the Forest Service and billed to the licensee at one and one-half times the stumpage otherwise payable. Licensees are also assessed a penalty rate for Crown timber that was not authorized. They are also charged double stumpage for timber cut which exceeds, on a 5-year average basis, 110 per cent of the annual harvesting rate prescribed in the licence.

Deposits

Until 1955, holders of most Timber Sale Licences were

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60. Regulation Governing the Sale of Crown Timber, op. cit., ss. 2.04, 2.041.

required to deposit with the Crown an amount equal to 10 per cent of the total stumpage value of the sale until logging was completed. In that year deposit requirements were changed to 10 per cent of the first $150,000 in stumpage value and 5 per cent of an excess of that amount, subject to a maximum deposit of $25,000 (this maximum was abolished in 1962). Since 1967 every licensee has had the option of grouping the deposits required under all of his licences together, and maintaining a continuous deposit equal to 50 cents per cunit of his total annual cut allowed under all his licences.[61] Portions of this deposit are nominally calculated to define the limit which can be forfeited on any individual sale. A deposit may take the form of cash, a certified cheque or parity bonds guaranteed by the Province.

Deposits are held against completion by the licensee of all his obligations under his contract with the Crown. For internal purposes, in the event that the amount of a deposit is insufficient to discharge all of his liabilities to the Crown, the Forest Service has adopted a system of priorities for dealing with it: first charge is given to waste assessment; second, to costs of slash disposal; and third, to merchantable timber left uncut.

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61. Ibid., ss. 2.03(e), 2.05.

Transfer of Rights

The various forms of sale licences may not be assigned or transferred from one party to another without the written consent of the Crown. Until recently, at least, consent has normally been given upon request and licences have frequently been transferred in this way. The practice of transferring "quota" through the tender procedure has already been noted, and this has been a much more significant way in which rights have been transferred over the years.

TREE FARM LICENCES

The private counterpart of the Public Sustained Yield Unit is the Tree Farm Licence. The regulated harvest of the former is allocated according to sustained yield principles by the Forest Service among different operators through the various forms of Timber Sale Licence described in the preceding section. Management of the latter is delegated to single licensees who combine their holdings of other tenures with Crown forest under sustained yield management plans, and in general hold an exclusive right to the total allowable harvest. Both were presented by the Royal Commission of 1945.[62]

Since 1947, when an amendment to the Forest Act[63] first authorized Forest Management Licences (later called Tree Farm Licences), a total of 41 of these tenures have been issued. Some have been consolidated over the years, so that only 34 remain outstanding. The tracts held under these licences are often immense, as Table 8 indicates, five of them exceeding a million acres; one is 6.6 million acres. These areas represent the total land area held under Tree Farm Licences, including non-productive forest land, which

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62. Sloan Report 1945, pp. 143 - 149.

63. Forest Act Amendment Act, 1947, S.B.C. 1947, c. 38, s. 12.

TABLE 8

SIZE DISTRIBUTION OF TREE FARM LICENCES

Size (thousands of acres[1])	Number of Licences
over 1,000	5
500 - 999	5
250 - 499	8
100 - 249	7
50 - 99	3
25 - 49	3
10 - 24	3

1. Includes productive and non-productive acres.

Source: B.C. Forest Service

in many cases is a significant portion of the total. They are consolidations into sustained yield units of Crown grants, old temporary tenures and other Crown forest land in proportions and amounts that vary widely. Of the 34 existing Tree Farm Licences, 23 contain more than 90 per cent Crown land over which the licensee had no prior tenure. Many of the licences on the Coast consist of a number of geographically separate parts.

Purpose and Intent

The objectives of Tree Farm Licences, insofar as they can be inferred from the Royal Commission of 1945, were

primarily twofold. First, it was considered a matter of some urgency that the forest resources of the Province be brought under orderly, sustained yield management; and it would be necessary to muster the financial and managerial resources of private enterprises as well as those of the Forest Service to this task. This new tenure arrangement induced timber companies to manage not only their own holdings but also tracts of uncommitted Crown timberlands according to sustained yield working plans. Thus Tree Farm Licences were intended to promote the orderly development and careful long-term management of the Province's forest resources.

Second, these licences were designed to promote industrial development, with attendant community stability by providing their holders with long-term supplies of timber sufficient to meet the needs of existing or new utilization plants. Since 1907, Timber Sales, for all practical purposes, had been the only means of obtaining new allocations of timber, and it was argued that these did not provide raw material supplies that were secure enough to justify the heavy investments required for pulp mills and other conversion plants.

Having accepted sustained yield as the ultimate goal of forest management, the Tree Farm Licence agreement

offered much appeal.

> The first step toward this objective would be a form of tenure permitting the operator to retain possession in perpetuity of the land now held under temporary forms of alienation, upon condition that he maintains these lands continuously productive and regulate the cut therefrom on a sustained-yield basis.[64]

Without relinquishing title or ultimate control over Crown lands the government was thus able to ensure that they would be properly regulated and managed by licensees. For their part, licensees were assured of the supplies of timber they needed to engage in long-term management of their private holdings and to invest in capital-intensive utilization plants. Clearly, these licences were designed to accommodate large, integrated corporations, although some licences have been issued to small enterprises and to one municipality as well. Many of the licences initially issued to the smaller operators have since been acquired by the larger concerns.

There was considerable public debate during the 1950's over the threat that these large allocations of timber posed for the future viability of small, independent enterprises. Several measures were therefore taken to protect that sector of the industry. First, Public Sustained

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64. Sloan Report 1945, p. 143.

Yield Units were to provide timber for smaller operators who could not assume responsibilities for managing entire sustained yield units. There was some consensus that the forests of the Province should be divided equally between Tree Farm Licences and these Public Sustained Yield Units,[65] thus to maintain opportunities for small and non-integrated operators.

Second, while Tree Farm Licences were typically designed to serve a particular pulp mill or other utilization facility, they were not intended to provide its total requirements.[66] By providing only some 80 per cent of the timber needed for the plant, the licensee would provide a market for the wood produced by independent firms operating in Public Sustained Yield Units. Third, Tree Farm Licences themselves provide encouragement for some of the licenced harvesting to be carried out by contractors (the "contractor clause" is discussed below).

The first two of these measures have failed to maintain the position of the small independent operator: the first because many of the Tree Farm licensees have acquired much

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65. Transcript of the Royal Commission on Forest Resources, 1956, pp. 234, 1924 (testimony of Dr. C.D. Orchard, then Chief Forester).

66. Ibid., p. 2671-3 (testimony of Dr. Orchard).

of the timber allocated in Public Sustained Yield Units; and the second, because initial cruises of Tree Farm Licences substantially underestimated their inventories and the annual harvest available under today's closer utilization practices. Table 9 illustrates this trend over the period 1961 to 1973.

Allocation Procedure

A Tree Farm Licence is a contract between the Crown and the licensee establishing a sustained yield forest unit to be managed by the licensee under the Crown's direction. The Minister is given entire discretion over whether the Crown will enter into one of these agreements. The Forest Act and Regulations give little insight into the priorities to be followed in alienating Tree Farm Licences, in contrast to the more specific treatment of Timber Sale procedures. Unlike Timber Sales, these licences do not call for competitive bidding, and the existing Tree Farm Licences were apparently negotiated on an ad hoc basis by the applicant on the one hand and the Forest Service and Minister on the other. The policy relating to alienation procedures has never been clearly stated and none of these licences have been issued to industry since 1966. It has been announced that a municipality in the northern Interior will receive one, probably in 1975. Since then, as before 1948, Crown timber disposal policy has depended almost exclusively on the Timber Sale Licence and its variants.

TABLE 9

TREE FARM LICENCES

INCREASES IN ANNUAL ALLOWABLE CUT

Tree Farm Licence No.	1961 Annual Allowable Cut	1973 Annual Allowable Cut	Per Cent Increase
	- in thousands of cunits -		(%)
1 and 40[1]	440.0	720.0	63.6
2	150.0	460.7	207.1
3	20.0	44.6	123.0
4 and 36	10.8	31.1	188.0
5	25.0	44.0	76.0
6	258.0	452.0	75.2
7	108.0	190.0	75.9
8 and 11	20.6	50.0	142.7
9	16.8	36.0	114.3
10	19.0	64.0	236.8
12	13.3	20.0	50.4
13	11.0	11.6	5.5
14	15.0	39.5	163.3
15	8.0	29.3	266.3
16	10.0	23.0	130.0
17	40.0	73.7	84.3
18	25.0	58.0	132.0
19	124.0	302.0	143.5
20	205.5	460.0	123.8
21	372.2	770.0	106.9
22	240.0	363.0	51.3
23	300.0	415.0	38.3
24	75.0	145.0	93.3
25	144.0	217.0	50.7
26	4.3	9.0	109.3
27	24.0	42.0	75.0
28, 29, 30, 31 and 34	77.3	140.0	81.1
32	5.5	8.7	58.2
33	3.9	9.4	141.0
35	11.7	35.0	199.1
36	8.7	31.0	256.3
37	204.0	404.0	98.0
38	41.5	93.0	124.1
39	439.1	1,261.2	187.2
41	n/a[2]	(312.0)	-
Total[3]	3,471.2	7,052.8	103.2

1. Tree Farm Licence No. 40 was issued in 1965, and amalgamated with No. 1 in 1970. The annual allowable cut for No. 40, which when issued was 220,000 cunits, has remained unchanged.
2. Tree Farm Licence No. 41 was not granted until 1966.
3. Excluding No. 41.

Source: B.C. Forest Service.

Composition of Licences

Tree Farm Licences enable owners of Crown-granted forest land and of harvesting rights on Crown land to combine these holdings with uncommitted Crown forest to form a sustained yield unit. The document defines a single contiguous geographical area or sometimes several dispersed areas, located and delineated according to the licensee's timber holdings and natural topographic features, such as watersheds. All other tenures held or acquired by the licensee within the boundaries must be included in the licence unit.[67]

Thus Tree Farm Licences include, in widely varying proportions, Crown grants, and old temporary tenures. While these are included in the management unit, the licensee is nonetheless bound by and can continue to benefit from most of the terms and statutory provisions relating to these other tenures.[68] The licensee's other tenures within the Tree Farm Licence are listed separately in the licence document as "Schedule A Lands", while the remaining area, consisting of otherwise unencumbered Crown land, is described as "Schedule B Lands". As the licensee removes the timber from his old temporary tenures those tenures are extinguished and the land is transferred to "Schedule B Lands". In addition, after the licensee has removed the timber from any

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67. Forest Act, op. cit., s. 36(8),(9).

68. Ibid., s. 36(10).

of his Crown-granted parcels he may elect to have them revert to the Crown and be transferred to "Schedule B Lands" also; but whatever his choice, such lands remain subject to the sustained yield plan once they are denuded.[69]

Some Crown-granted lands included in "Schedule A Lands" are classified as Taxation Tree Farms under the Taxation Act,[70] as described earlier. Thus the licensee can enjoy the property tax privileges accorded to Taxation Tree Farm land and also the contribution that these lands make to the annual allowable harvest of the Tree Farm Licence.

The licensee may withdraw "Schedule A Lands" from the licence only with the consent of the Minister. Crown lands in "Schedule B Lands" are not available for sale under the Land Act or the Taxation Act.[71] The Crown may augment these lands,[72] or, by the terms of the licence, withdraw up to one per cent of their productive area if they are required for experimental purposes, parks or aesthetic reasons. Further, any such lands required for "higher economic use" or other

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69. Ibid., s. 36(13)(13a).

70. Op. cit., ss. 38, 39. These are sometimes also referred to as "Certified Tree Farms".

71. Forest Act, op. cit., s. 36(12)(a).

72. Ibid., s. 36(14).

uses deemed essential to the public interest (for example, mining) may be withdrawn; but if the withdrawal diminishes productive capacity by more than one-half of one per cent the Crown is obliged to provide other Crown lands in substitution. Finally, withdrawals of rights-of-way may be made from "Schedule B Lands" without restriction, and the Minister may authorize use of these lands for purposes not prejudicial to the timber harvesting rights of the licensee.

In some Tree Farm Licences allowance was made for persons other than the licensee to harvest timber in the licence area, for a limited duration and up to a stated maximum volume. This policy, authorized by Section 36(30) of the Forest Act, has been invoked in favour of timber included in the licence area when the licence was issued, or which demonstrated a need after the date of issue. In the latter instance, the licences were amended.

Rights and Obligations

The rights and obligations of both the licensee and the Crown under Tree Farm Licences are defined partly in the contract documents themselves and partly in the Forest Act and Regulations. Many provisions are common to all licences while others vary from one licence to another reflecting the special circumstances of different licences

or differences in policy when the licences were first issued or renewed. The following discussion is intended to reflect only the general nature of the Tree Farm Licences that have been issued to date, and it should be kept in mind that many of them contain provisions that are unique to themselves.

Term. The early Tree Farm Licences (then Forest Management Licences) were valid in perpetuity, cancellable only if the licensee failed to carry out his obligations. In 1958, following recommendations in the Royal Commission Report of 1956,[73] the term of all new licences was set at 21 years. From time to time since 1958, with the execution of amalgamations and other amendments, the terms of many of the perpetual licences have been reduced to 21 years. The Forest Act provides that when its term expires, a licence may be renewed, subject to renegotiation of its terms and conditions, and consistent with the Act and regulations at the time of application for renewal.[74] The Minister may cancel or suspend a licence or the right to renewal if the licensee fails to comply with the Forest Act, the licence, or Cutting Permits issued under the licence.[75] The termination

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73. Sloan Report 1956, p. 96.

74. Forest Act, op. cit., s. 36(2)(b).

75. Ibid., s. 36(26). Further causes listed in the licences are bankruptcy or insolvency.

of the current terms of licences outstanding is indicated in Table 10.

TABLE 10

TREE FARM LICENCES
DISTRIBUTION OF EXPIRY DATES

Year	Number Expiring
1979	20 *
1980	5
1981	1
1982	2
1987	1
1990	2
1991	2
1992	1
Total	34

* Includes those issued to be valid in perpetuity, except those renewed since 1966.

Source: B.C. Forest Service

Management Obligations. The forest management responsibilities of licensees are heavier under Tree Farm Licences than under any other form of tenure. To ensure proper management and harvesting according to sustained yield principles the licensee is required to submit working plans for successive 5-year periods. Working plans cover operations on all tenures within the licence, and include

inventory data and allowable cut calculations for areas covered. These plans must be prepared by a Registered Professional Forester and approved by the Forest Service, and govern all harvesting activities.

Like the development plan required under Timber Sale Harvesting Licences, the working plans indicate the sequence and nature of logging operations; road construction, reforestation, protection and other forestry programmes; and cutting budgets. The latter must ensure long-term sustained yields from the licenced area.

To harvest from any land, including old temporary tenures and Crown grants included in the licence, the licensee is obliged to obtain Cutting Permits from the Forest Service, authorizing short-term operations on prescribed tracts under detailed terms and conditions. Cutting Permits also contain directives concerning utilization standards, slash disposal, environmental protection and so on. These permits and the procedures followed in issuing them, are similar to those explained earlier under Timber Sale Licences.

Harvesting by Contractors. The so-called "contractor clause" in most Tree Farm Licences commits the licensee to provide the opportunity to independent operators to harvest

up to a fixed percentage of the harvesting work. The earliest licences contained no "contractor clause", and when it first appeared the fraction was set at 30 per cent. In those issued more recently a 50 per cent fraction has been prescribed. In most cases the percentage is applied to the volume cut from "Schedule B Lands" only, so that the weight of the obligation varies among licences depending upon both the stipulated percentage and the proportion of the harvest taken from "Schedule B Lands". The Minister may waive this requirement if compliance with it is not feasible. The obligation is typically met by contracting out "phases" of the operation such as logging, trucking or road construction.

Crown Charges

On timber cut from Crown-granted lands and old temporary tenures within a Tree Farm Licence the licensee is obliged to pay the statutory royalty applicable to these tenures described earlier.[76] On timber cut from other Crown lands he must pay stumpage (inclusive of statutory royalty) as appraised by the Forest Service.[77] The appraisal procedures described earlier for Timber Sale Licences apply in this case also; but the Tree Farm licensee enjoys one significant advantage. While Timber Sale Licences provide

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76. Ibid., ss. 58, 60, and see footnote 14 above.

77. Ibid., s. 36(20)(a).

opportunities for competitive bids in excess of the appraised upset price, Tree Farm Licences do not. Thus Tree Farm licensees are immune from competition, and hence they always pay only the upset price for stumpage-bearing timber.

Under the Forest Act licensees are obliged to pay an annual rental of 1 cent per acre on all "Schedule B Lands" contained in the licence area.[78] On old temporary tenures included in "Schedule A Lands" the annual rental is 50 cents per acre (25 cents in the case of Pulp Licences and 11 cents for Pulp Leases) which is the same rate that applies to these tenures outside Tree Farm Licences.

The forest protection tax applies to Tree Farm Licences at a rate of 10 cents per cunit of the total allowable annual cut.[79] Old temporary tenures within Tree Farm Licences are exempt from the forest land tax levied under the Taxation Act.[80] Crown-granted lands included do not receive any special tax consideration, and hence bear the tax liabilities explained earlier.

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78. Ibid., s. 36(12).

79. Ibid., s. 126(3)(a).

80. Taxation Act, op. cit., s. 24(n).

Appurtenancy and Transferability

In keeping with the objectives relating to industrial development and community stability underlying this form of tenure, most Tree Farm Licences are appurtenant to a timber manufacturing facility - usually an integrated forest products complex. The facility must be capable of utilizing a volume at least equal to the annual rate of harvest authorized under the Tree Farm Licence, although there is no requirement that that fibre be utilized at that particular plant. All timber cut from the licence area, including the harvest from Crown grants dated before 1906, must be manufactured in the Province.[81]

The licence document may provide that any appurtenant manufacturing facility may not be sold or transferred separately from the licence. In such cases ownership of the mill and the licence must continue to be vested in the same party. Licences not appurtenant to facilities may not be transferred without the consent of the Minister.[82]

Current Status

The 34 Tree Farm Licences now in force cover 7.7 per cent of the total productive forest land in the Province,

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81. Forest Act, op. cit., s. 36(24).

82. Forest Act, op. cit., s. 36(22).

and their general distribution can be seen on the map in the Appendix. Many are concentrated on Vancouver Island: these are the ones that include the highest proportions of Crown-granted land and old temporary tenures, and contain much of the most valuable timber. More than 25 per cent of the total timber harvested in 1973 came from Tree Farm Licences, and roughly 25 per cent of the allowable harvest from all sustained yield regulated forest lands is attributable to these tenures as well.

As Table 9 shows, the annual allowable harvest from these licences is considerably in excess of the quantities estimated at the time they were granted. This is partly due to improved inventory information, but more importantly a result of close utilization practices.

PULPWOOD HARVESTING AGREEMENTS

Pulpwood Harvesting Agreements are a recent innovation in provincial forest policy. They differ from other tenures insofar as the holder of one of these agreements is not obliged to cut timber: he has, instead, an option to harvest wood not considered suitable for sawmilling within a prescribed region. To date, five of these agreements are in force - all in the Interior; one other was executed but was later cancelled.

Purpose and Intent

Pulpwood Harvesting Agreements were designed to provide raw material supplies for new pulp mills proposed in regions where the available timber harvest was more-or-less fully committed to sawmill operators under "quota" arrangements. In the absence of pulping facilities these operators could utilize timber suitable only for lumber manufacture which, in many Interior forests, excludes a large fraction of the total wood available. It is this material unsuitable for lumber that is made available to holders of Pulpwood Harvesting Agreements.

These agreements were designated not only to promote the establishment of pulp mills, but also the encourage "close utilization" in sawmilling. To this end the holder of an

agreement is required to purchase the pulp chips and other residues produced by sawmills in the course of lumber manufacture. By thus providing a certain market for this pulping material, sawmill operators were encouraged to invest in the barking and chipping equipment required to produce it. As a result of this and other incentives (see the discussion of "Third Band" Timber Sales, p. 59) most sawmills in the Interior are now equipped with these facilities for making chips from lumber residues.

Allocation Procedure

The Minister has power under the Forest Act[83] to designate any Interior Public Sustained Yield Unit or group of these units as a Pulpwood Harvesting Area, and to grant an option to harvest the pulpwood in that area. Pulpwood is loosely defined as timber considered unsuitable for production of lumber.[84]

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83. Ibid., s. 17A.

84. The Forest Act, s. 60(1) defines "pulpwood" as timber cut into lengths not exceeding four feet, or, declared by the Minister to be pulpwood, "upon it being shown to his satisfaction that the timber is below the standard of utilization for sawmilling purposes in the district in which it is cut". Under the Pulpwood Harvesting Area Agreements, it has been declared to include logging waste, damaged and down trees, logs below sawmilling standards left by logging operators, standing trees of a kind not suitable for sawmilling, decadent stands, and any other timber which is below sawmilling standards "at the rotation ages currently in effect in the administrative unit wherein such stands are located" (that is, small roundwood).

By public advertisement the Minister may "invite proposals from persons interested in establishing a utilization plant to utilize the pulpwood" in the area, and through hearings he may receive proposals and counter proposals as well as objections to them.[85] The Minister is under no obligation to accept any proposal.[86] If he receives more than one proposal he must advertise and sell the option, if at all, by means of competitive bidding on the stumpage price; but where only one proposal is submitted he need not advertise.[87] All five agreements currently in force were granted without competition, and in the one Pulpwood Harvesting Area where bids were tendered no agreement was eventually executed.

Rights and Obligations

The five Pulpwood Harvesting Agreements currently outstanding have many key characteristics in common, but each contains unique features that reflect its special circumstances and official policy at the time it was issued. Only the basic provisions common to all agreements and some of the significant exceptions are explained here.

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85. Ibid., s. 17A (3)(b).

86. Ibid., s. 17A (3)(e).

87. Ibid., s. 17A (3)(c).

Term. All current agreements carry the maximum term of 21 years permitted under the Forest Act, which are renewable subject to renegotiation of terms and conditions.[88] Either the Crown or the licensee may terminate the agreement by giving two years' notice, or the Crown may do so if the company becomes insolvent.

Rights to Timber. The main obligation of the Crown under these agreements is to make a certain annual volume of pulpwood available to the licensee. The pulp company that holds the contract has an exclusive option to harvest this wood, subject to stumpage and other conditions.

The terms of the agreement do not restrict the Crown from granting rights to others to harvest the sawtimber in the Pulpwood Harvesting Area. Rights to harvest pulpwood may be granted to others as well, if the licensee declares he does not wish to acquire that material, or as long as he is given a right of first refusal to purchase it from the harvester. All rights to harvest roundwood are made by Timber Sale Licence. As explained below, holders of Pulpwood Harvesting Agreements have rarely exercised their right to purchase pulpwood.

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88. Ibid., s. 17A (3)(d).

Obligations to Purchase Wood. While Pulpwood Harvesting Agreements commit the Crown to make pulpwood available to the licensee if he wishes to exercise his option, they also oblige him to utilize sawmill residues and salvage logs produced "in and about" the Pulpwood Harvesting Area. This obligation extends to using the salvage pulpwood left on the ground by logging operators, and to purchasing tops and other material suitable for pulp manufacture from logging operators, pulpwood from settlers, and chips, slabs and edgings from sawmill operators. The duty to purchase chip residues from sawmills is the most important of these requirements.

The pulp company holding the agreement must fulfill these responsibilities to the "fullest extent consistent with economic feasibility and sound programming of raw material". This rather nebulous phrase makes it difficult to interpret the extent of the obligation, but in most instances other clauses offer further guidance. The duty to purchase pulpwood is limited to volumes offered at prices which are "competitive with the cost of all other roundwood delivered at the pulp mill". In most agreements, the pulp company need not pay higher (nor lower) than "competitive prices" for residual chips, although one contract specifies that the price may not be higher than the cost of converting roundwood into chips, and another does not qualify the prices at all.

Crown Charges

Pulpwood Harvesting Agreements stipulate that at least for the initial years of their terms any pulpwood provided by the Crown to the licensee will bear the salvage royalty rate of 20 cents per cunit if it is produced from logged-over lands and 55 cents per cunit if it is decadent or sound roundwood material below sawmill standards. The usual rental and forest protection tax are payable on any lands held from time to time under Timber Sale Licences granted under the agreements. As mentioned, however, these charges are rarely relevant.

Appurtenant Mill and Transferability

These agreements require the holder to construct a pulp mill by a certain date and to maintain it at a prescribed capacity during the term of the agreement. All timber cut under the agreement must be used in the appurtenant mill. The agreement may not be transferred or assigned (except for financing purposes) without the consent of the Minister.

Current Status

To date, pulp mill companies holding Pulpwood Harvesting Agreements have drawn almost exclusively on residual chips from sawmills for their source of raw material. The option to purchase roundwood has almost never been exercised; and, indeed, most of the relevant pulp mills have no facilities

for utilizing roundwood.

To this extent, Pulpwood Harvesting Agreements have not served the primary purpose envisaged for them, except insofar as they have provided an assurance of raw materials to investors, before construction of the mills. As long as residual chips are available from sawmills, they are preferred to roundwood; and it is obviously more efficient to encourage the sawmill licensees to harvest all the material (rather than leave pulpwood for a second logging operation) in forest stands, extract whatever lumber can be manufactured from it in sawmills equipped for "close utilization", and chip the residual material for sale to the pulp mill.

So far, this supply of residual material in general has been adequate to the needs of pulp companies holding Pulpwood Harvesting Agreements, and their security of supply form this source has been reinforced by the "chip direction" provisions explained in connection with Timber Sale Licences and "third band" sales. In fact, "chip direction" was designed to accommodate the processing of pulpwood through sawmills, by assuring the pulp mills of their supply while the sawmills were guaranteed a market for the chips under the Pulpwood Harvesting Agreements.

The constraints on competition for chips imposed by

"chip direction" policy and Pulpwood Harvesting Agreements have contributed to debate over the sufficiency of chip prices paid by pulp mills to sawmills. Many sawmilling companies required to deliver chips to designated pulp mills have entered into long-term price agreements under private contracts between the two parties. The financial interest of the pulp mills in chip prices is clear enough; that of the sawmills is blurred by the fact that the Interior stumpage appraisal system appropriates for the Crown a substantial share of any general increase in chip prices. In November 1974, legislation was passed giving the Cabinet the power to specify the prices at which chips may be sold.[89]

In short, the availability of residual chips has made the main purpose of Pulpwood Harvesting Agreements - providing secure supplies of pulpwood - largely redundant. Moreover, the fact that the pulp companies have found it economically advantageous to purchase residual chips rather than to process roundwood, makes their obligation to do so under these agreements to some degree redundant as well. These contracts therefore have little effect on the pattern of wood utilization, and undoubtedly have much less impact than the "chip direction" policy.

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89. Timber Products Stabilization Act, S.B.C. 1974 c. 115, s.2.

MINOR TENURES

We have described the forms of tenures which collectively account for almost all the timber cut in the Province on a commercial basis. However, legislation specifies tenure-like arrangements for a wide range of forest-related activities not covered by these conventional tenures, and authorizes use of the Timber Sale for some special cases. The principal features of these provisions deserve brief mention.

Salvage or Special Sale Areas

The Lieutenant-Governor in Council may designate salvage or special sale areas over uncommitted Crown land where timber must be removed to prepare the land for other purposes, where the timber is damaged or threatened with destruction, or where for other reasons wood utilization can thereby be encouraged.[90]. These sales normally take the form of a Timber Sale Licence, with their duration being set out by Order-in-Council. The Minister is given complete discretion regarding alienation procedures and terms and conditions. The standard Timber Sale Licence document is frequently used, with necessary modifications. In recent years these devices have been used to dispose of timber found to be

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90. Forest Act, op. cit., s. 27.

below sawmill utilization standards, and for other purposes including once-only allotments for dam reservoir clearing, burned over and insect infested salvaging, and sale of timber below sawmilling standards.

Closely related to salvage and special sales are experimental sales, which the Minister may make to confer rights to cut timber on Crown land reserved for experimental purposes.[91]

Licences to Cut

The Licence to Cut is a means of selling the timber on Crown or private lands, where the person owning or occupying the land is not otherwise entitled to harvest the timber.[92] Licences to Cut are commonly issued to cover Crown leases, rights-of-way and mineral claims, and set out appraised stumpage, term, and other rights and obligations.

Free-Use Permits

The Minister may grant Free-Use Permits to confer rights to cut timber from uncommitted Crown land for limited purposes, free of stumpage and royalty. Agricultural settlers requiring

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91. Forest Act, op. cit., s. 28.

92. Forest Act, op. cit., s. 24.

timber for agricultural development, anyone needing cordwood for their own domestic purposes, Boards of School Trustees needing cordwood for school purposes, settlers of Crown lands cutting cordwood, pulpwood and fenceposts for sale, certain scientific investigators, and holders of mineral rights, who need mine timbers all qualify for such permits.[93] Permits may be granted also to municipalities or other organizations responsible for alleviation of unemployment and poverty, for the purposes of relief.[94] Permits are not available to applicants who hold sufficient timber on their own land to meet their needs.

Rights-of-Way

Logging operators may invoke special provisions in the Forest Act[95] to obtain access into otherwise unaccessible timber stands, across private or Crown land. They may expropriate a right-of-way across private land, subject to payment of compensation to its owner. In addition, the Minister or an authorized officer of the Forest Service may allow Crown lands to be used for rights-of-way, and without advertisement, sell any timber upon a proposed right-of-way area. In these instances the timber is sold to the applicant

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93. Forest Act, op. cit., ss. 25, 25A.

94. Ibid., s. 26.

95. Part VI, ss. 50 - 56.

at the appraised upset price, without competition.

Farm Woodlot Licences

The Forest Act offers scope for a farmer to combine his own forest land (if any) with uncommitted Crown forest land into a small sustained yield unit, not exceeding the lesser of 640 acres in size or enough to yield 10,000 cubic feet annual production.[96] Where the applicant owns some forest land, that acreage must be included with the Crown land as part of the unit. The Crown land and timber in the unit is reserved from disposition by the Crown.

Farm Woodlot Licences are appurtenant to the farm property and are not transferable. Management plans must be approved by the Forest Service. No rental or taxes are payable on the Crown land portion, but appraised stumpage (inclusive of royalty) is payable on the timber harvested. In 1973 only 39 licences were outstanding, covering approximately 14,000 acres, with an aggregate allowable annual cut of 2,900 cunits.[97]

Christmas Tree Permits

A special form of Timber Sale Licence, specifying

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96. Forest Act, op. cit., s.20.

97. British Columbia Forest Service; Annual Report, 1973, Queen's Printer, Victoria, 1973, p. 93.

stumpage rates, is used to authorize harvest of Christmas trees from Crown lands. Some of these short-term permits grant rights to an annual allowable cut, while others merely specify a maximum number of trees which may be harvested over their terms.

4. ISSUES IN TENURE POLICY

The most conspicuous feature of forest tenure policy that emerges from this review is its complexity. This is perhaps surprising insofar as the bulk of the Province's forest resources are owned and controlled by a single entity: the Crown. But the system is even more complicated than our foregoing review implies, because we have made a conscious effort in this paper to simplify our exposition of tenure arrangements in the interests of broad perspective. Because the Crown is the pervasive owner of the forest resources of the Province, the contractual commitments that it has made for their exploitation and management is a matter of considerable public interest; yet it can safely be asserted that a comprehensive understanding of the rights and obligations prevailing over these most valuable natural resources is confined to very few people.

The preceding discussion illustrates that timber allocation policy cannot adequately be deduced from the statutes or contracts alone. Much depends upon administrative procedures, practices and regulations, and changing industrial circumstances. This circumstance complicates analysis of tenure policies and their implications, but at the same time it increases the need for periodic reassessment.

This is not to say that complexity, in itself, is

necessarily detrimental. The circumstances of the industry are so varied, and the nature of the resources and demands on them so diverse that a simple or uniform tenure policy is not likely to consistently serve the public interest. As indicated at the beginning of this paper there have been repeated calls for rationalization of forest tenure arrangements as new forms have been added over the years. But if rationalization is to improve the system it should surely follow from explicit analysis of deficiencies in existing arrangements rather than from the pursuit of simplicity for its own sake.

It is not our purpose in preparing this paper to make recommendations for reforms in forest tenure policy, but rather to contribute to an understanding of the present system as an aid to identifying areas of concern. Any new policy directions should obviously flow from observed inconsistencies between present arrangements and current public objectives. The present arrangements have been summarized in the preceding pages. Some guidance about the public policy objectives is found in the Terms of Reference given to the Task Force, where we were directed to formulate any recommendations toward ensuring:

> - that the full potential contribution of the public forests to the economic and social welfare of British Columbians is realized, recognizing the diverse commercial wood products, recreation and wildlife benefits, domestic stock grazing and environmental values of forest resources.

> - that the payments made for Crown timber reflect the full value of the resources made available for harvesting costs, forestry and development costs and profits; and that the marketing arrangements for timber products permit their full value to be realized.
>
> - that the health and vigor of the forest industry in the Province is maintained.
>
> - that good forest management in terms of harvesting practices, protection and conservation, reforestation and silviculture is provided for.98

Application of these general criteria to the present forest tenure arrangements raises a host of questions. The following paragraphs address only a few of these, which seem to be central to the issues.

Does the tenure system permit proper resource management?

One of the most striking features of the various forms of tenure over Crown forest land is their potentially great flexibility in terms of the harvesting conditions and resource management responsibilities that the Crown may impose. Most Crown forests are managed under closely regulated sustained yield principles, and the government has wide scope for altering rates of cutting and resource management as may be required. Harvesting authorizations and licence contracts offer almost unlimited scope for ensuring that forest protection, silvicultural needs and

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98. Crown Charges for Early Timber Rights, op. cit., Appendix A.

environmental values are adequately considered. These controls are broadest under the various forms of Timber Sale Licence and Tree Farm Licence, including the old temporary tenures and Crown grants forming a part of the latter. On old temporary tenures outside Tree Farm Licences these provisions have been considerably more limited, although these contracts offer plenty of scope for closer public regulation. Opportunities for public control over management practices are narrowest on Crown-granted lands lying outside sustained yield management units, where they are limited mainly to certain protective measures and discretionary requirements respecting reforestation. Scope for governmental regulation of management practices, or indeed the exercise of this regulatory power, does not, of course, ensure that optimum resource management will follow: that is conditional upon the aptness of the regulations imposed. But the tenure arrangements prevailing over most forest land in the Province are conspicuous for the opportunities they provide for supervising resource conservation and management.

It is misleading to suggest, however, that the only or even the main requirement for good forest management is direct governmental controls. As long as private firms are depended upon to carry out the harvesting and other activities, the outcome will depend heavily on the incentives they operate under. The financial incentives at work through the

stumpage and royalty system have been discussed elsewhere.[99] Incentives for close utilization offered in the form of increased allocations of timber have been referred to above, as have the incentives provided for sustained yield management of Crown-granted lands and old temporary tenures in Tree Farm Licences, Taxation Tree Farms and other tenure arrangements. A complete review of the incentives that encourage and discourage desirable management behavior would include such diverse issues as the methods of reimbursing forestry and development expenditures, the effects of unstocked land on allowable cutting rates, and taxation arrangements - too numerous to examine here.

Does the policy provide adequate assurance of wood supplies to manufacturing plants?

The degree to which tenure arrangements should provide investors in utilization facilities with assured long-term wood supplies, and the best means of doing so, has been an issue of debate throughout the Province's history. The controversy has seldom centered on the amount of timber the Forest Service has made available; for while there has been criticism of its methodology and field application, the sustained yield principles used in determining allowed rates of harvesting have enjoyed a wide measure of acceptance. In

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99. Ibid., and Timber Appraisal, Second Report of the Task Force on Crown Timber Disposal, Victoria, 1974.

any event, that is a separate question that must be left to investigation elsewhere. The main concern of industrialists has been, rather, that in the absence of opportunities to secure wood supplies through land acquisition, harvesting rights over Crown timber must enable them to ensure the long-term requirements of their utilization plants. This need has figured importantly in tenure policy since the early Timber and Pulp Leases were granted explicitly to secure the raw material needs of particular sawmills and pulp mills. More recently, Tree Farm Licences were designed for the same purpose, as were Timber Sale Harvesting Licences and Pulpwood Harvesting Agreements.

The argument supporting a tenures policy designed to provide enough timber over a sufficiently long period to justify a forest venture applies to independent logging as well as to manufacturing operations, and tenures such as the 21-year Timber Sale Licences granted in the early 1950's were designed to accommodate logging enterprises that involved especially heavy development costs.[100] But generally, the term over which assured supplies are said to be required in the interests of investment planning is longer for manufacturing ventures, particularly for pulp mills.

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100. More recent provisions for recovery of such costs through the stumpage payment system presumably reduce this need.

Concern about assurance of wood supplies extends beyond the needs of individual enterprises to the economic stability of communities and regions. But the latter depends more on continuity of the regulated harvest than upon its allocation to a particular mill. The extent to which forest tenure policy should accommodate the raw material requirements of individual conversion facilities should be judged in light of several factors. First, provision of standing timber to owners of manufacturing facilities is only one way of ensuring access to raw material supplies. Markets for logs, if they are sufficiently large and competitive, are another; and in British Columbia the coastal log market has traditionally served this function.[101] The need to supply the needs of plants through rights to standing timber is obviously more compelling where their access to logs or chips produced by others is more restricted. At the same time, however, policies that tie timber to particular conversion plants obviously constrain the marketing of intermediate products.

Second, to the extent that forest tenures should secure the wood requirements of manufacturing plants, the question of how much of the plant's total input should be provided in this way must be assessed. The fraction of a mill's require-

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101. Timber Appraisal, op. cit., chapter 5 and Appendix C, describe the essential features of this market and comment on its performance.

ments needed through linked tenure arrangements must depend upon accessibility to intermediate product markets and to other standing timber. Early Timber and Pulp Leases were apparently meant to meet the appurtenant mills' total input needs; but Tree Farm Licences and, more recently, the Special Timber Sale Harvesting Licences were intended to meet only a substantial proportion of the mills' capacity requirements, leaving the mills to acquire the rest elsewhere.

Third, there is the issue of how long such supplies should be assured. This must be decided in light of the number of years normally planned for recovery of capital invested in manufacturing plants, but provisions for renewability of tenures and availability of new supplies are relevant also. The principle of perpetual rights originally embodied in the terms of Tree Farm Licences has been abandoned, and the duration of all tenures except Crown grants is now limited. The longest terms of rights to Crown timber are those in some of the old temporary tenures held by certain large companies. Apart from this exception, all current rights to Crown timber carry terms of 21 years or less. The tenures most closely tied to particular mills are Tree Farm Licences with terms of 21 years; Timber Sale Harvesting Licences of 10 to 20 years and Pulpwood Harvesting Agreements of 21 years. Superimposed on these formal arrangements, however, is the "quota" system in Public Sustained

Yield Units which has created informal understandings about assured supplies over an indefinite period.

Finally, there is the question of how any such provisions for utilization plants can best be provided. The traditional method has been to grant rights over prescribed geographical areas, estimated to be capable of yielding the needed quantity of timber over the desired period. This approach has resulted in allocations which often proved to diverge considerably from what was intended, primarily because of inaccurate inventory data and changes in utilization technology. As indicated earlier, the sustainable yield from all Tree Farm Licences, for example, now considerably exceeds the estimates made at the time they were granted. Thus the objective of providing a predetermined long-term flow of timber for manufacturing facilities has been frustrated in the past by imperfect resource information and technological change.

The alternative approach, embodied in the more recent tenures such as Timber Sale Harvesting Licences and Pulpwood Harvesting Agreements, is to grant rights to a specified volume of timber per year. This circumvents the onus on inventory data and prediction of technological change associated with the licencing of particular tracts. But the problem threatens to arise in another way, because commitments of volumes within

a regulated management unit must be reconciled, in total, with that unit's regulated rate of harvest, and its total allowable cut must be calculated from estimates of its inventory and growth capacity. For example, in the Interior, inventory estimates of the volume of timber available typically include all material exceeding four inches in diameter, and a substantial proportion of the total consists of material in tops between four and six inches. In winter logging operations, when the wood is brittle, these small tops often break off at diameters exceeding the prescribed four inches and are not recovered. With a full commitment of the estimated recoverable volume under Timber Sale Harvesting Licences, unpredicted losses of this kind are likely to result in the harvesting of more timber than was planned. In short, under fully committed annual harvests, the licencing of volumes rather than tracts does not eliminate the problems of imprecise inventory data and estimates of recovery.

Is the system amenable to regional development goals?

Throughout the Province's history, the forest policy has been an instrument for promoting industrial development and moulding its regional distribution. From the beginning, rights to harvest Crown timber under certain forms of tenure have been conditional upon construction and operation of manufacturing plants. While the details of negotiations that

preceded the granting of early leases, Tree Farm Licences and more recently Timber Sale Harvesting Licences and Pulpwood Harvesting Agreements are not well recorded, it is clear that a major objective of the government was to establish manufacturing industry in various parts of the Province. The results indicate that the tenure system is capable of providing a strong influence on the pattern of development.

Does the tenure system promote efficient industrial structure?

The impact of the tenure system on the structure of the forest industry is difficult to assess, but in the long-run it is undoubtedly among the most critical standards on which the policy must be judged. Over recent decades, as the industry has grown, the most conspicuous trend has been its increasing concentration to a few large, integrated and in several cases multinational corporations, not only in the manufacturing sector but in logging and rights to standing timber as well. The tenure system has obviously accommodated this trend; but whether it has promoted it or retarded it, and to what extent it has been an influence, is more difficult to analyse. This trend can probably be attributed, in part at least, to technological changes that create increasing economies of scale; and insofar as this is so, bigness and integration may enhance efficiency. But evidence of economies of scale in logging and sawmilling, if not pulp

manufacture, is ambiguous, and while it is apparent in marketing this is often achieved through cooperative arrangements. In any event the tenure system must be assessed for any distortions it introduces in the optimum industrial structure.

One consideration is whether the current mixture of tenure arrangements is neutral in its provisions for operating companies of different sizes and structures. Clearly, there are some forms of tenure designed to accommodate the large integrated firms and others more suited to small non-integrated operations; but in some respects the resulting pattern suggests unbalanced advantage. The very extensive tracts that are licenced to large integrated companies, such as Pulp Leases, Tree Farm Licences and Pulpwood Harvesting Agreements provide rights to Crown timber on generally more favourable terms than the tenures held by smaller operators. They carry longer terms and exclusive rights without susceptibility to competitive bidding. The old temporary tenures which are mostly held by the large firms have, in general, provided better timber at considerably lower prices than the tenures typically available to small operations. The large firms also acquired a large proportion of the Crown-granted timberlands which carry little or no royalty, and, like the old temporary tenures outside Tree Farm Licences are subject to much less demanding regulatory

control. In many cases these more advantageous holdings are the result of judicious investments on the part of the holders. But the large size of many of these tenures, the historical pattern of consolidation of the holdings of large firms, and their associated manufacturing facilities have often made these tenures unavailable to smaller companies. Transfers of rights between large and small firms have thus been mostly one-way.

In the Public Sustained Yield Units, which were intended to provide timber for smaller operators at the time Tree Farm Licences were introduced to serve the needs of integrated corporations, the position of small firms has eroded significantly. Roughly half of the approved allowable cut in the Public Sustained Yield Units of the Kamloops, Nelson, Prince Rupert and Cariboo Forest Districts is under licence to four large companies or less, and in the Vancouver and Prince George Forest Districts to five and six companies respectively. The harvest in some Public Sustained Yield Units is entirely allocated to a single company. This does not prove that the tenure system has caused these trends, of course. Indeed there are some features of the system, notably the protection from competition afforded to established operators, that have undoubtedly strengthened the position of many small operations.

The increasing concentration of timber rights in integrated companies has tended to constrain the marketing of intermediate products such as logs and pulp chips, which in turn has impeded unintegrated manufacturing and logging enterprises.[102] On the other hand, small enterprises that deal with the larger corporations are often assisted by them in periods of financial difficulty.

Apart from the distribution of rights between firms of different structure, the tenure system has implications for industrial efficiency in at least two other respects. The first relates to efficiency in the use of wood. Insofar as the tenure system distorts the allocation of timber among firms with different kinds of manufacturing facilities, constrains marketing in intermediate products, or causes distortions in the prices of different kinds of logs, chips or other products, the optimum use of wood will be impeded. The second relates to the extent to which the procedures for allocating rights ensure that the timber will be acquired by the most efficient potential user. The privileges now accorded to established operators that have largely eliminated competition for Crown timber have removed one process for selection of efficient firms in the interests of industrial stability.

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102. See Timber Appraisal, Ibid., Chapters 4 and 11 and Appendix C.

Do the arrangements protect the public financial interest in timber?

The expressed public objective, noted earlier, is to appropriate for the Crown the full net value of public timber after due allowances for necessary costs of operations and profit to the operator. There is considerable evidence that current arrangements do not accomplish this objective - in particular the substantial market value of harvesting rights reflected in private transactions. In the absence of vigorous competitive bidding for rights, the onus for extracting the public equity in Crown timber falls on the stumpage appraisal system and royalty system, which has been examined elsewhere.[103] The question of adequate public revenues from Crown-granted timber raises more complex issues of principle.

Does the system facilitate effective administrative control?

The remarkable flexibility of forest tenure arrangements and their susceptibility to detailed regulatory control has already been emphasized. The ease of exercising this control in practice is a somewhat different matter. It is generally acknowledged that the Forest Service is understaffed for dispatching its responsibilities in management and surveillance over the vast forests of the Province, but in some respects the tenure system complicates the task. An

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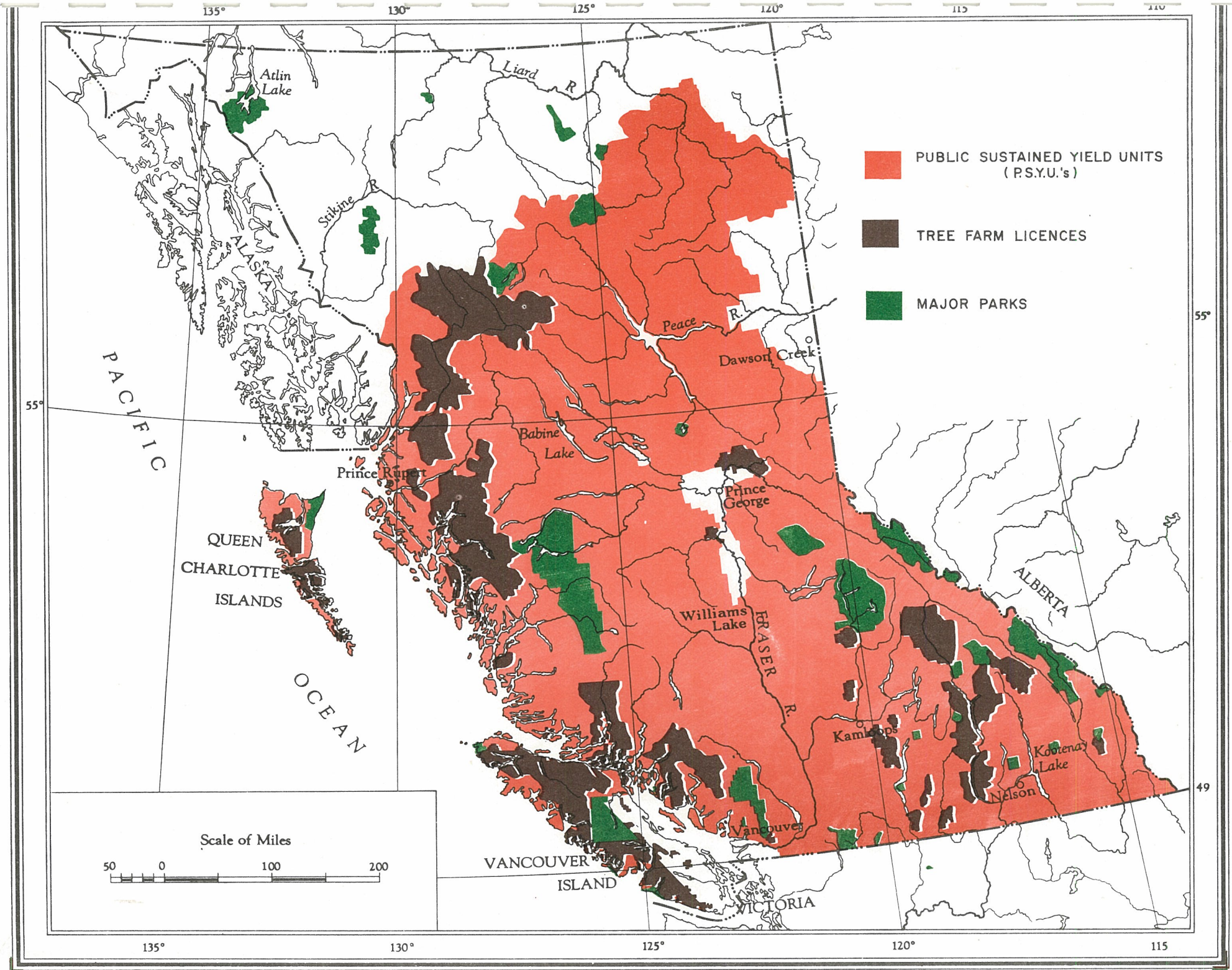
103. Ibid.

obvious problem is the sheer complexity of the system - the enormous diversity of rights and obligations under various arrangements, which is an obstacle to clear understanding of management requirements. Many tenures overlap, such as those in Tree Farm Licences and Pulpwood Harvesting Areas; others interlock, such as those susceptible to "chip direction" policy; and there are many minor forms and special arrangements that have unclear distinctions and purposes. In another dimension, the exercise of flexible regulatory control is constrained by informal commitments which leave little room for manoeuvre. And to an increasing degree, allocation procedures and management control have been reduced to bilateral arrangements between the Forest Service and licensees.

On Crown-granted lands not included under regulated sustained yield arrangements, effective management control is narrowly constrained. The fact that the Crown has such restricted powers over the use and forest management on these lands, while their location often makes them subject to the most intense public demands for non-timber purposes, has begun to raise concern. The quality of management of these lands varies considerably, and there has been recurrent debate over whether they are, in general, managed better or worse than Crown forests. Since those lands which are not integrated into Tree Farm Licences or Taxation Tree Farms are not

regulated with respect to the rate of harvesting, there is also some anxiety that the objectives of sustained yield by regions (particularly the Vancouver Forest District) will, in the long term, be frustrated. Of more immediate concern is the lack of public control over such matters as environmental protection, fire abatement, provisions for fish and wildlife and public access. Because of the proximity of many of these lands to concentrations of population, they tend also to attract public crticism over aesthetic damage resulting from harvesting practices.

A significant feature of some of the major forms of tenure is the extent to which they enable the Forest Service to call on the resources of licensees for purposes of resource management. As mentioned earlier, this was an important consideration in the design of Forest Management Licences, but licensees have increasingly been charged with resource management responsibilities under other tenures as well. The tenures of longer term have also provided licensees with more lasting interest in particular areas. These features have almost certainly resulted in a higher standard of forest management in certain areas than could otherwise have been expected.



Base map compiled by Geographic Division, Surveys and Mapping Branch, Dept. of Lands & Forests, Victoria, B.C.

CORRIGENDA

Page No.		
ii	(Preface).	after "... none" *insert* "other than Handloggers' Licences"
17	line 2.	*delete* "for" and *insert* "by"
18	line 4.	*delete* "independent"
	line 5.	*delete* "Some" and *insert* "Three"
22	footnote 1.	after "scaled" *insert* "and billed"
	footnote 3.	after "Reserves" *insert* "and National Parks"
36	line 21.	after "Leases" *insert* "and Timber Berths"
38	line 7-8.	*delete* sentence "They are ... one year" and *insert* "They were originally granted on one-year terms, although most have since been reissued with longer terms ranging up to 36 years from the present."
43	line 12.	after "facilities" *insert* "except Timber Berths, and for these the provision requiring construction of a sawmill has not been enforced."
52	line 19-20.	*delete* "without any ... required."
56	line 14.	after "responsibilities" *add* "(although most are required to submit a logging or operating plan)."
	bottom line	*delete* "Some contracts" and *insert* "All Interior Timber Sale Harvesting Licences"
57	line 17.	*delete* "four" and *insert* "five"
58	line 11.	*delete* "establishes ... conveying" and *insert* "conveys"
59	line 2.	*delete* "In one instance"
	footnote 41, line 6-7.	*delete* "that can ... lengths" and *insert* "less than 8 feet in length."
	footnote 42, line 4.	*delete* "6-inch" and after "diameter" *add* "of 6 inches on the Coast and 4 inches in the Interior."

Page No.		
61	line 6.	*delete* "five" and *insert* "three"
	line 7.	after "recently" *insert* "5-year"
65	footnote 46, line 15.	after "'annual cut'" *insert* "or 'quota'"
	line 16.	*delete* sentence "This scheme ... sales."
69	line 21-22	*delete* "most common" and *insert* "the maximum"
	last sentence	*delete* "five years ... terms" and *insert* "three years for area sales and recently for five years for volume sales."
70	line 1.	after "sales" *insert* "except "third band" sales and the Special 12-year Timber Sale Harvesting Licences"
71	line 21.	*delete* "and is ... sales"
77	line 18-19.	*delete* "on a ... licence" and *insert* "150 per cent of the approved harvest in any year or 110 per cent of the approved harvest over a 5-year period."
78	line 11.	*delete* "Portions of this deposit" and *insert* "Deposits"
79	line 7.	*delete* "and this ... years." and *insert* "but this has not been a frequent occurrence. Currently, the Forest Service recommends in favour of or against reassignments after studying the ownership, milling capacity and timber supply of the enterprises involved and the cut control requirements, and circumstances of employment in the area."
89	line 13.	after "favour of" *insert* "operators on Crown"
	line 15.	*delete* "which" and *insert* "who"
94	line 17.	after "consideration" *insert* "unless they are included in a Taxation Tree-Farm,"
98	line 7.	after "most" *insert* "of the larger"

Page No.		
102	line 14.	*delete* "prescribed" and *insert* "minimum"
117	3rd line from bottom.	*delete* "10 to 20" and *insert* "10, 12 or 21"
119	lines 4 to 18.	*delete* "For example ... recovery."

British Columbia. Task Force on Crown Timber Disposal. *Forest Tenures in British Columbia*. 2nd printing. Victoria: British Columbia Forest Service, 1974. http://www.llbc.leg.bc.ca/public/pubdocs/bcdocs2010/318726/foresttenuresinbc.pdf